

SAFETY DATA SHEET



InterPlay Adenoviral TAP System, Part Number 240215

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name	:	InterPlay Adenoviral TAP System, Part Number 240215																																																															
Part no. (chemical kit)	:	240215																																																															
Part no.	:	<table border="0"> <tr> <td><input checked="" type="checkbox"/></td> <td>β-Mercaptoethanol</td> <td>200345-21</td> </tr> <tr> <td></td> <td>Adenoviral pCTAP Shuttle Vector - A</td> <td>240216-51</td> </tr> <tr> <td></td> <td>Adenoviral pCTAP Shuttle Vector - B</td> <td>240216-52</td> </tr> <tr> <td></td> <td>pCTAP Shuttle vector-C</td> <td>240216-53</td> </tr> <tr> <td></td> <td>Adenoviral pTAP Shuttle-CAT Vector</td> <td>240217-51</td> </tr> <tr> <td></td> <td>pShuttle-CMV-lacZ Control Vector</td> <td>240008-51</td> </tr> <tr> <td></td> <td>AD-293 Cell Line >1 x 10e6 Viable Cells</td> <td>240085-41</td> </tr> <tr> <td></td> <td>BJ5183-AD-1 electroporation competent cells</td> <td>200157-41</td> </tr> <tr> <td></td> <td>Transformation Control</td> <td>200157-42</td> </tr> <tr> <td></td> <td>XL10-Gold Ultracompetent cells</td> <td>200315-41</td> </tr> <tr> <td></td> <td>XL10-Gold 2-Mercaptoethanol</td> <td>200314-43</td> </tr> <tr> <td></td> <td>pUC 18 DNA Control Plasmid</td> <td>200231-42</td> </tr> <tr> <td></td> <td>Lysis Buffer</td> <td>240107-51</td> </tr> <tr> <td></td> <td>0.5 M EDTA</td> <td>240107-52</td> </tr> <tr> <td></td> <td>Streptavidin Resin</td> <td>240105-51</td> </tr> <tr> <td></td> <td>Streptavidin Binding Buffer</td> <td>240107-54</td> </tr> <tr> <td></td> <td>Streptavidin Elution Buffer</td> <td>240107-56</td> </tr> <tr> <td></td> <td>Streptavidin Supernatant Supplement</td> <td>240107-57</td> </tr> <tr> <td></td> <td>MS-Grade Calmodulin Resin</td> <td>240106-51</td> </tr> <tr> <td></td> <td>Calmodulin Binding Buffer</td> <td>240107-58</td> </tr> <tr> <td></td> <td>Calmodulin Elution Buffer</td> <td>240107-59</td> </tr> </table>	<input checked="" type="checkbox"/>	β-Mercaptoethanol	200345-21		Adenoviral pCTAP Shuttle Vector - A	240216-51		Adenoviral pCTAP Shuttle Vector - B	240216-52		pCTAP Shuttle vector-C	240216-53		Adenoviral pTAP Shuttle-CAT Vector	240217-51		pShuttle-CMV-lacZ Control Vector	240008-51		AD-293 Cell Line >1 x 10e6 Viable Cells	240085-41		BJ5183-AD-1 electroporation competent cells	200157-41		Transformation Control	200157-42		XL10-Gold Ultracompetent cells	200315-41		XL10-Gold 2-Mercaptoethanol	200314-43		pUC 18 DNA Control Plasmid	200231-42		Lysis Buffer	240107-51		0.5 M EDTA	240107-52		Streptavidin Resin	240105-51		Streptavidin Binding Buffer	240107-54		Streptavidin Elution Buffer	240107-56		Streptavidin Supernatant Supplement	240107-57		MS-Grade Calmodulin Resin	240106-51		Calmodulin Binding Buffer	240107-58		Calmodulin Elution Buffer	240107-59
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1.2 Relevant identified uses of the substance or mixture and uses advised against

Material uses	:	Analytical reagent.																										
		<table border="0"> <tr> <td>β-Mercaptoethanol</td> <td>0.75 ml (69 µl 14.4 M)</td> </tr> <tr> <td>Adenoviral pCTAP Shuttle Vector - A</td> <td>0.02 ml (20 µg 1 µg/µl)</td> </tr> <tr> <td>Adenoviral pCTAP Shuttle Vector - B</td> <td>0.02 ml (20 µg 1 µg/µl)</td> </tr> <tr> <td>pCTAP Shuttle vector-C</td> <td>0.02 ml</td> </tr> <tr> <td>Adenoviral pTAP Shuttle-CAT Vector</td> <td>0.02 ml (20 µg 1 µg/µl)</td> </tr> <tr> <td>pShuttle-CMV-lacZ Control Vector</td> <td>0.01 ml (10 µg 1 µg/µl)</td> </tr> <tr> <td>AD-293 Cell Line >1 x 10e6 Viable Cells</td> <td>1 ml</td> </tr> <tr> <td>BJ5183-AD-1 electroporation competent cells</td> <td>0.5 ml</td> </tr> <tr> <td>Transformation Control</td> <td>0.01 ml (0.1 ng/µl 10 µl)</td> </tr> <tr> <td>XL10-Gold Ultracompetent cells</td> <td>0.5 ml</td> </tr> <tr> <td>XL10-Gold 2-Mercaptoethanol</td> <td>0.5 ml</td> </tr> <tr> <td>pUC 18 DNA Control Plasmid</td> <td>0.01 ml (0.1 ng/µl)</td> </tr> <tr> <td>Lysis Buffer</td> <td>50 ml</td> </tr> </table>	β-Mercaptoethanol	0.75 ml (69 µl 14.4 M)	Adenoviral pCTAP Shuttle Vector - A	0.02 ml (20 µg 1 µg/µl)	Adenoviral pCTAP Shuttle Vector - B	0.02 ml (20 µg 1 µg/µl)	pCTAP Shuttle vector-C	0.02 ml	Adenoviral pTAP Shuttle-CAT Vector	0.02 ml (20 µg 1 µg/µl)	pShuttle-CMV-lacZ Control Vector	0.01 ml (10 µg 1 µg/µl)	AD-293 Cell Line >1 x 10e6 Viable Cells	1 ml	BJ5183-AD-1 electroporation competent cells	0.5 ml	Transformation Control	0.01 ml (0.1 ng/µl 10 µl)	XL10-Gold Ultracompetent cells	0.5 ml	XL10-Gold 2-Mercaptoethanol	0.5 ml	pUC 18 DNA Control Plasmid	0.01 ml (0.1 ng/µl)	Lysis Buffer	50 ml
β-Mercaptoethanol	0.75 ml (69 µl 14.4 M)																											
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XL10-Gold Ultracompetent cells	0.5 ml																											
XL10-Gold 2-Mercaptoethanol	0.5 ml																											
pUC 18 DNA Control Plasmid	0.01 ml (0.1 ng/µl)																											
Lysis Buffer	50 ml																											

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0.5 M EDTA	0.2 ml
Streptavidin Resin	1.25 ml
Streptavidin Binding Buffer	25 ml
Streptavidin Elution Buffer	5 ml
Streptavidin Supernatant Supplement	0.1 ml
MS-Grade Calmodulin Resin	0.625 ml
Calmodulin Binding Buffer	40 ml
Calmodulin Elution Buffer	2.5 ml

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition	:	β-Mercaptoethanol	Mono-constituent substance
		Adenoviral pCTAP Shuttle Vector - A	Mixture
		Adenoviral pCTAP Shuttle Vector - B	Mixture
		pCTAP Shuttle vector-C	Mixture
		Adenoviral pTAP Shuttle-CAT Vector	Mixture
		pShuttle-CMV-lacZ Control Vector	Mixture
		AD-293 Cell Line >1 x 10e6 Viable Cells	Mixture
		BJ5183-AD-1 electroporation competent cells	Mixture
		Transformation Control	Mixture
		XL10-Gold Ultracompetent cells	Mixture
		XL10-Gold	Mixture
		2-Mercaptoethanol	Mixture
		pUC 18 DNA Control Plasmid	Mixture
		Lysis Buffer	Mixture
		0.5 M EDTA	Mixture
		Streptavidin Resin	Mixture
		Streptavidin Binding Buffer	Mixture
		Streptavidin Elution Buffer	Mixture
		Streptavidin Supernatant Supplement	Mixture
		MS-Grade Calmodulin	Mixture

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SECTION 2: Hazards identification

Resin
Calmodulin Binding Mixture
Buffer
Calmodulin Elution Buffer Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

β-Mercaptoethanol

H301	ACUTE TOXICITY (oral)	Category 3
H310	ACUTE TOXICITY (dermal)	Category 2
H331	ACUTE TOXICITY (inhalation)	Category 3
H315	SKIN CORROSION/IRRITATION	Category 2
H318	SERIOUS EYE DAMAGE/EYE IRRITATION	Category 1
H317	SKIN SENSITISATION	Category 1A
H361f	REPRODUCTIVE TOXICITY	Category 2
H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	Category 2
H400	SHORT-TERM (ACUTE) AQUATIC HAZARD	Category 1
H411	LONG-TERM (CHRONIC) AQUATIC HAZARD	Category 2

XL10-Gold

2-Mercaptoethanol

H318	SERIOUS EYE DAMAGE/EYE IRRITATION	Category 1
H317	SKIN SENSITISATION	Category 1
H361f	REPRODUCTIVE TOXICITY	Category 2
H412	LONG-TERM (CHRONIC) AQUATIC HAZARD	Category 3

0.5 M EDTA

H319	SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2
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Streptavidin Resin

H226	FLAMMABLE LIQUIDS	Category 3
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Streptavidin Supernatant Supplement

H360D	REPRODUCTIVE TOXICITY	Category 1B
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MS-Grade

Calmodulin Resin

H226	FLAMMABLE LIQUIDS	Category 3
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Ingredients of unknown toxicity

: BJ5183-AD-1 electroporation competent cells	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
: XL10-Gold Ultracompetent cells	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
: XL10-Gold	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
: 2-Mercaptoethanol	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
: Streptavidin Supernatant Supplement	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
: MS-Grade Calmodulin Resin	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%

Ingredients of unknown ecotoxicity

: βJ5183-AD-1 electroporation competent cells	Contains 2.3% of components with unknown hazards to the aquatic environment
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See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

SECTION 2: Hazards identification

2.2 Label elements

Hazard pictograms

: β-Mercaptoethanol



XL10-Gold
2-Mercaptoethanol



0.5 M EDTA



Streptavidin Resin



Streptavidin Supernatant
Supplement



MS-Grade Calmodulin
Resin




Signal word

: β-Mercaptoethanol	Danger
Adenoviral pCTAP Shuttle Vector - A	No signal word.
Adenoviral pCTAP Shuttle Vector - B	No signal word.
pCTAP Shuttle vector-C	No signal word.
Adenoviral pTAP Shuttle-CAT Vector	No signal word.
pShuttle-CMV-lacZ Control Vector	No signal word.
AD-293 Cell Line >1 x 10e6 Viable Cells	No signal word.
BJ5183-AD-1 electroporation competent cells	No signal word.
Transformation Control	No signal word.
XL10-Gold Ultracompetent cells	No signal word.
XL10-Gold 2-Mercaptoethanol	Danger
pUC 18 DNA Control Plasmid	No signal word.
Lysis Buffer	No signal word.
0.5 M EDTA	Warning
Streptavidin Resin	Warning
Streptavidin Binding Buffer	No signal word.
Streptavidin Elution	No signal word.

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SECTION 2: Hazards identification

	Buffer	
	Streptavidin Supernatant Supplement	Danger
	MS-Grade Calmodulin Resin	Warning
	Calmodulin Binding Buffer	No signal word.
	Calmodulin Elution Buffer	No signal word.
Hazard statements	:  2-Mercaptoethanol	H301 + H331 - Toxic if swallowed or if inhaled. H310 - Fatal in contact with skin. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H361f - Suspected of damaging fertility. H373 - May cause damage to organs through prolonged or repeated exposure. (heart, liver) (oral) H410 - Very toxic to aquatic life with long lasting effects. No known significant effects or critical hazards.
	Adenoviral pCTAP Shuttle Vector - A	
	Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.
	pCTAP Shuttle vector-C	No known significant effects or critical hazards.
	Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.
	pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.
	BJ5183-AD-1 electroporation competent cells	No known significant effects or critical hazards.
	Transformation Control	No known significant effects or critical hazards.
	XL10-Gold Ultracompetent cells	No known significant effects or critical hazards.
	XL10-Gold 2-Mercaptoethanol	H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H361f - Suspected of damaging fertility. H412 - Harmful to aquatic life with long lasting effects. No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	Lysis Buffer	No known significant effects or critical hazards.
	0.5 M EDTA	H319 - Causes serious eye irritation.
	Streptavidin Resin	H226 - Flammable liquid and vapour.
	Streptavidin Binding Buffer	No known significant effects or critical hazards.
	Streptavidin Elution Buffer	No known significant effects or critical hazards.
	Streptavidin Supernatant Supplement	H360D - May damage the unborn child.
	MS-Grade Calmodulin Resin	H226 - Flammable liquid and vapour.
	Calmodulin Binding Buffer	No known significant effects or critical hazards.
	Calmodulin Elution Buffer	No known significant effects or critical hazards.

Precautionary statements

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SECTION 2: Hazards identification

Prevention	: <input checked="" type="checkbox"/> -Mercaptoethanol	P280 - Wear protective gloves, protective clothing and eye or face protection. P273 - Avoid release to the environment. P262 - Do not get in eyes, on skin, or on clothing. P260 - Do not breathe vapour. Not applicable.
	Adenoviral pCTAP Shuttle Vector - A	Not applicable.
	Adenoviral pCTAP Shuttle Vector - B	Not applicable.
	pCTAP Shuttle vector-C	Not applicable.
	Adenoviral pTAP Shuttle-CAT Vector	Not applicable.
	pShuttle-CMV-lacZ Control Vector	Not applicable.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not applicable.
	BJ5183-AD-1 electroporation competent cells	Not applicable.
	Transformation Control XL10-Gold Ultracompetent cells	Not applicable.
	XL10-Gold 2-Mercaptoethanol	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P273 - Avoid release to the environment.
	pUC 18 DNA Control Plasmid	Not applicable.
	Lysis Buffer	Not applicable.
	0.5 M EDTA	P280 - Wear eye or face protection.
	Streptavidin Resin	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	Streptavidin Binding Buffer	Not applicable.
	Streptavidin Elution Buffer	Not applicable.
	Streptavidin Supernatant Supplement	P201 - Obtain special instructions before use.
	MS-Grade Calmodulin Resin	P280 - Wear protective gloves, protective clothing and eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	Calmodulin Binding Buffer	Not applicable.
	Calmodulin Elution Buffer	Not applicable.
Response	: <input checked="" type="checkbox"/> -Mercaptoethanol	P391 - Collect spillage.
	Adenoviral pCTAP Shuttle Vector - A	Not applicable.
	Adenoviral pCTAP Shuttle Vector - B	Not applicable.
	pCTAP Shuttle vector-C	Not applicable.
	Adenoviral pTAP Shuttle-CAT Vector	Not applicable.
	pShuttle-CMV-lacZ Control Vector	Not applicable.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not applicable.
	BJ5183-AD-1 electroporation competent cells	Not applicable.
	Transformation Control XL10-Gold	Not applicable.

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SECTION 2: Hazards identification

	Ultracompetent cells	
	XL10-Gold	P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
	2-Mercaptoethanol	
	pUC 18 DNA Control	Not applicable.
	Plasmid	
	Lysis Buffer	Not applicable.
	0.5 M EDTA	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P337 + P313 - If eye irritation persists: Get medical advice or attention.
	Streptavidin Resin	Not applicable.
	Streptavidin Binding Buffer	Not applicable.
	Streptavidin Elution Buffer	Not applicable.
	Streptavidin Supernatant Supplement	P308 + P313 - IF exposed or concerned: Get medical advice or attention.
	MS-Grade Calmodulin Resin	Not applicable.
	Calmodulin Binding Buffer	Not applicable.
	Calmodulin Elution Buffer	Not applicable.
Storage	: 2-Mercaptoethanol	Not applicable.
	Adenoviral pCTAP Shuttle Vector - A	Not applicable.
	Adenoviral pCTAP Shuttle Vector - B	Not applicable.
	pCTAP Shuttle vector-C	Not applicable.
	Adenoviral pTAP Shuttle-CAT Vector	Not applicable.
	pShuttle-CMV-lacZ Control Vector	Not applicable.
	AD-293 Cell Line >1 x 10 ⁶ Viable Cells	Not applicable.
	BJ5183-AD-1 electroporation competent cells	Not applicable.
	Transformation Control	Not applicable.
	XL10-Gold	Not applicable.
	Ultracompetent cells	
	XL10-Gold	Not applicable.
	2-Mercaptoethanol	
	pUC 18 DNA Control	Not applicable.
	Plasmid	
	Lysis Buffer	Not applicable.
	0.5 M EDTA	Not applicable.
	Streptavidin Resin	Not applicable.
	Streptavidin Binding Buffer	Not applicable.
	Streptavidin Elution Buffer	Not applicable.
	Streptavidin Supernatant Supplement	Not applicable.
	MS-Grade Calmodulin Resin	Not applicable.
	Calmodulin Binding Buffer	Not applicable.
	Calmodulin Elution Buffer	Not applicable.

SECTION 2: Hazards identification

Disposal	:	β -Mercaptoethanol	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.	
		Adenoviral pCTAP Shuttle Vector - A	Not applicable.	
		Adenoviral pCTAP Shuttle Vector - B	Not applicable.	
		pCTAP Shuttle vector-C	Not applicable.	
		Adenoviral pTAP Shuttle-CAT Vector	Not applicable.	
		pShuttle-CMV-lacZ Control Vector	Not applicable.	
		AD-293 Cell Line >1 x 10e6 Viable Cells	Not applicable.	
		BJ5183-AD-1 electroporation competent cells	Not applicable.	
		Transformation Control XL10-Gold	Not applicable.	
		Ultracompetent cells XL10-Gold	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.	
		2-Mercaptoethanol	Not applicable.	
		pUC 18 DNA Control Plasmid	Not applicable.	
		Lysis Buffer	Not applicable.	
		0.5 M EDTA	Not applicable.	
		Streptavidin Resin	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.	
		Streptavidin Binding Buffer	Not applicable.	
		Streptavidin Elution Buffer	Not applicable.	
		Streptavidin Supernatant Supplement	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.	
	Hazardous ingredients	:	XL10-Gold	- 2-Mercaptoethanol
			2-Mercaptoethanol	
		Lysis Buffer	Not applicable.	
		0.5 M EDTA	Not applicable.	
		Streptavidin Binding Buffer	Not applicable.	
		Streptavidin Elution Buffer	Not applicable.	
		Streptavidin Supernatant Supplement	- imidazole	
		MS-Grade Calmodulin Resin	Not applicable.	
		Calmodulin Binding Buffer	Not applicable.	
		Calmodulin Elution Buffer	Not applicable.	
Supplemental label elements	:	β -Mercaptoethanol	Not applicable.	
		Adenoviral pCTAP Shuttle Vector - A	Not applicable.	
		Adenoviral pCTAP Shuttle Vector - B	Not applicable.	
		pCTAP Shuttle vector-C	Not applicable.	
		Adenoviral pTAP Shuttle-CAT Vector	Not applicable.	
		pShuttle-CMV-lacZ	Not applicable.	

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SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Control Vector	
AD-293 Cell Line >1 x 10e6 Viable Cells	Not applicable.
BJ5183-AD-1 electroporation competent cells	Not applicable.
Transformation Control	Not applicable.
XL10-Gold Ultracompetent cells	Not applicable.
XL10-Gold 2-Mercaptoethanol	Not applicable.
pUC 18 DNA Control Plasmid	Not applicable.
Lysis Buffer	Not applicable.
0.5 M EDTA	Not applicable.
Streptavidin Resin	Not applicable.
Streptavidin Binding Buffer	Not applicable.
Streptavidin Elution Buffer	Not applicable.
Streptavidin Supernatant Supplement	Not applicable.
MS-Grade Calmodulin Resin	Not applicable.
Calmodulin Binding Buffer	Not applicable.
Calmodulin Elution Buffer	Not applicable.
β-Mercaptoethanol	Not applicable.
Adenoviral pCTAP Shuttle Vector - A	Not applicable.
Adenoviral pCTAP Shuttle Vector - B	Not applicable.
pCTAP Shuttle vector-C	Not applicable.
Adenoviral pTAP Shuttle-CAT Vector	Not applicable.
pShuttle-CMV-lacZ	Not applicable.
Control Vector	
AD-293 Cell Line >1 x 10e6 Viable Cells	Not applicable.
BJ5183-AD-1 electroporation competent cells	Not applicable.
Transformation Control	Not applicable.
XL10-Gold Ultracompetent cells	Not applicable.
XL10-Gold 2-Mercaptoethanol	Not applicable.
pUC 18 DNA Control Plasmid	Not applicable.
Lysis Buffer	Not applicable.
0.5 M EDTA	Not applicable.
Streptavidin Resin	Not applicable.
Streptavidin Binding Buffer	Not applicable.
Streptavidin Elution Buffer	Not applicable.
Streptavidin Supernatant Supplement	Restricted to professional users.
MS-Grade Calmodulin Resin	Not applicable.
Calmodulin Binding Buffer	Not applicable.
Calmodulin Elution Buffer	Not applicable.

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SECTION 2: Hazards identification

Special packaging requirements

Tactile warning of danger	:	β-Mercaptoethanol	Not applicable.
		Adenoviral pCTAP Shuttle Vector - A	Not applicable.
		Adenoviral pCTAP Shuttle Vector - B	Not applicable.
		pCTAP Shuttle vector-C	Not applicable.
		Adenoviral pTAP Shuttle-CAT Vector	Not applicable.
		pShuttle-CMV-lacZ Control Vector	Not applicable.
		AD-293 Cell Line >1 x 10e6 Viable Cells	Not applicable.
		BJ5183-AD-1 electroporation competent cells	Not applicable.
		Transformation Control	Not applicable.
		XL10-Gold Ultracompetent cells	Not applicable.
		XL10-Gold 2-Mercaptoethanol	Not applicable.
		pUC 18 DNA Control Plasmid	Not applicable.
		Lysis Buffer	Not applicable.
		0.5 M EDTA	Not applicable.
		Streptavidin Resin	Not applicable.
		Streptavidin Binding Buffer	Not applicable.
		Streptavidin Elution Buffer	Not applicable.
		Streptavidin Supernatant Supplement	Not applicable.
		MS-Grade Calmodulin Resin	Not applicable.
		Calmodulin Binding Buffer	Not applicable.
		Calmodulin Elution Buffer	Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

	PBT	P	B	T	vPvB	vP	vB
β-Mercaptoethanol	N/A	N/A	N/A	Yes	N/A	N/A	N/A

Adenoviral pCTAP Shuttle Vector - A This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Adenoviral pCTAP Shuttle Vector - B This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

pCTAP Shuttle vector-C This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Adenoviral pTAP Shuttle-CAT Vector This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

pShuttle-CMV-lacZ Control Vector This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

AD-293 Cell Line >1 x 10e6 Viable Cells This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

BJ5183-AD-1 electroporation competent cells This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Transformation Control This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

InterPlay Adenoviral TAP System, Part Number 240215

SECTION 2: Hazards identification

XL10-Gold Ultracompetent cells	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
XL10-Gold	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
2-Mercaptoethanol	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
pUC 18 DNA Control Plasmid	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Lysis Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
0.5 M EDTA	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Streptavidin Resin	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Streptavidin Binding Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Streptavidin Elution Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Streptavidin Supernatant Supplement	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
MS-Grade Calmodulin Resin	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Calmodulin Binding Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Calmodulin Elution Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification

: β-Mercaptoethanol	None known.
: Adenoviral pCTAP Shuttle Vector - A	None known.
: Adenoviral pCTAP Shuttle Vector - B	None known.
: pCTAP Shuttle vector-C	None known.
: Adenoviral pTAP Shuttle-CAT Vector	None known.
: pShuttle-CMV-lacZ Control Vector	None known.
: AD-293 Cell Line >1 x 10e6 Viable Cells	None known.
: BJ5183-AD-1 electroporation competent cells	None known.
: Transformation Control	None known.
: XL10-Gold Ultracompetent cells	None known.
: XL10-Gold	None known.
: 2-Mercaptoethanol	None known.
: pUC 18 DNA Control Plasmid	None known.
: Lysis Buffer	None known.
: 0.5 M EDTA	None known.
: Streptavidin Resin	None known.
: Streptavidin Binding Buffer	None known.
: Streptavidin Elution Buffer	None known.
: Streptavidin Supernatant Supplement	None known.
: MS-Grade Calmodulin Resin	None known.
: Calmodulin Binding Buffer	None known.
: Calmodulin Elution Buffer	None known.

InterPlay Adenoviral TAP System, Part Number 240215

SECTION 3: Composition/information on ingredients

			Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Repr. 2, H361f STOT RE 2, H373 (heart, liver) (oral) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411	
Lysis Buffer Polyoxyethylene octyl phenyl ether	CAS: 9002-93-1	≤0.3	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1] [5]
0.5 M EDTA Edetic acid	EC: 200-449-4 CAS: 60-00-4 Index: 607-429-00-8	≥10 - ≤25	Eye Irrit. 2, H319	[1]
Streptavidin Resin Ethanol	EC: 200-578-6 CAS: 64-17-5 Index: 603-002-00-5	≥10 - ≤25	Flam. Liq. 2, H225	[2]
Streptavidin Binding Buffer Polyoxyethylene octyl phenyl ether	CAS: 9002-93-1	≤0.3	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1] [5]
Streptavidin Elution Buffer Polyoxyethylene octyl phenyl ether	CAS: 9002-93-1	≤0.3	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1] [5]
Streptavidin Supernatant Supplement calcium chloride	EC: 233-140-8 CAS: 10043-52-4 Index: 017-013-00-2	≤3	Eye Irrit. 2, H319	[1]
Imidazole	EC: 206-019-2 CAS: 288-32-4 Index: 613-319-00-0	<1	Acute Tox. 4, H302 Skin Corr. 1C, H314 Repr. 1B, H360D	[1]
MS-Grade Calmodulin Resin Ethanol	EC: 200-578-6 CAS: 64-17-5 Index: 603-002-00-5	≥10 - ≤25	Flam. Liq. 2, H225	[2]
Sodium chloride	EC: 231-598-3 CAS: 7647-14-5	≤3	Eye Irrit. 2, H319	[1]
Calmodulin Binding Buffer Polyoxyethylene octyl phenyl ether	CAS: 9002-93-1	≤0.3	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1] [5]
Calmodulin Elution Buffer Polyoxyethylene octyl phenyl ether	CAS: 9002-93-1	≤0.3	Acute Tox. 4, H302	[1] [5]

InterPlay Adenoviral TAP System, Part Number 240215

SECTION 3: Composition/information on ingredients

			Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy
- [*] Substance
- [A] Constituent
- [B] Impurity
- [C] Stabilising additive

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: β-Mercaptoethanol	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
	Adenoviral pCTAP Shuttle Vector - A	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Adenoviral pCTAP Shuttle Vector - B	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	pCTAP Shuttle vector-C	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Adenoviral pTAP Shuttle-CAT Vector	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	pShuttle-CMV-lacZ Control Vector	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	BJ5183-AD-1 electroporation competent cells Transformation Control	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	XL10-Gold Ultracompetent cells	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	XL10-Gold 2-Mercaptoethanol	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly

SECTION 4: First aid measures

pUC 18 DNA Control Plasmid	by a physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Lysis Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
0.5 M EDTA	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Streptavidin Resin	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Streptavidin Binding Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Streptavidin Elution Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Streptavidin Supernatant Supplement	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
MS-Grade Calmodulin Resin	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Calmodulin Binding Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Calmodulin Elution Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation : β-Mercaptoethanol	Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Adenoviral pCTAP Shuttle Vector - A	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Adenoviral pCTAP Shuttle Vector - B	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
pCTAP Shuttle vector-C	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Adenoviral pTAP Shuttle-CAT Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
pShuttle-CMV-lacZ Control Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
AD-293 Cell Line >1 x	Remove victim to fresh air and keep at rest in a position

SECTION 4: First aid measures

10e6 Viable Cells	comfortable for breathing. Get medical attention if symptoms occur.
BJ5183-AD-1 electroporation competent cells Transformation Control	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
XL10-Gold Ultracompetent cells	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
XL10-Gold 2-Mercaptoethanol	Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
pUC 18 DNA Control Plasmid	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Lysis Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
0.5 M EDTA	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Streptavidin Resin	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Streptavidin Binding Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Streptavidin Elution Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Streptavidin Supernatant Supplement	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-

SECTION 4: First aid measures

		mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	MS-Grade Calmodulin Resin	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	Calmodulin Binding Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Calmodulin Elution Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: β-Mercaptoethanol	Get medical attention immediately. Call a poison center or physician. Gently wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Adenoviral pCTAP Shuttle Vector - A	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Adenoviral pCTAP Shuttle Vector - B	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pCTAP Shuttle vector-C	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Adenoviral pTAP Shuttle-CAT Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pShuttle-CMV-lacZ Control Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	BJ5183-AD-1 electroporation competent cells Transformation Control	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	XL10-Gold Ultracompetent cells	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	XL10-Gold 2-Mercaptoethanol	Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure.

SECTION 4: First aid measures

		Wash clothing before reuse. Clean shoes thoroughly before reuse.
pUC 18 DNA Control Plasmid		Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Lysis Buffer		Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
0.5 M EDTA		Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Streptavidin Resin		Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Streptavidin Binding Buffer		Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Streptavidin Elution Buffer		Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Streptavidin Supernatant Supplement		Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
MS-Grade Calmodulin Resin		Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Calmodulin Binding Buffer		Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Calmodulin Elution Buffer		Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: β-Mercaptoethanol	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	Adenoviral pCTAP Shuttle Vector - A	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Adenoviral pCTAP Shuttle Vector - B	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not

SECTION 4: First aid measures

pCTAP Shuttle vector-C	induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Adenoviral pTAP Shuttle-CAT Vector	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
pShuttle-CMV-lacZ Control Vector	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
AD-293 Cell Line >1 x 10e6 Viable Cells	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
BJ5183-AD-1 electroporation competent cells	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Transformation Control	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
XL10-Gold Ultracompetent cells	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
XL10-Gold 2-Mercaptoethanol	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
pUC 18 DNA Control Plasmid	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not

SECTION 4: First aid measures

Lysis Buffer	induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
0.5 M EDTA	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Streptavidin Resin	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Streptavidin Binding Buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Streptavidin Elution Buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Streptavidin Supernatant Supplement	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
MS-Grade Calmodulin Resin	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position

SECTION 4: First aid measures

comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Calmodulin Binding Buffer

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Calmodulin Elution Buffer

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders : β -Mercaptoethanol

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Adenoviral pCTAP Shuttle Vector - A

No action shall be taken involving any personal risk or without suitable training.

Adenoviral pCTAP Shuttle Vector - B

No action shall be taken involving any personal risk or without suitable training.

pCTAP Shuttle vector-C

No action shall be taken involving any personal risk or without suitable training.

Adenoviral pTAP Shuttle-CAT Vector

No action shall be taken involving any personal risk or without suitable training.

pShuttle-CMV-lacZ

No action shall be taken involving any personal risk or without suitable training.

Control Vector

No action shall be taken involving any personal risk or without suitable training.

AD-293 Cell Line >1 x 10⁶ Viable Cells

No action shall be taken involving any personal risk or without suitable training.

BJ5183-AD-1

No action shall be taken involving any personal risk or without suitable training.

electroporation

No action shall be taken involving any personal risk or without suitable training.

competent cells

No action shall be taken involving any personal risk or without suitable training.

Transformation Control

No action shall be taken involving any personal risk or without suitable training.

XL10-Gold

No action shall be taken involving any personal risk or without suitable training.

Ultracompetent cells

No action shall be taken involving any personal risk or without suitable training.

XL10-Gold

No action shall be taken involving any personal risk or without suitable training.

2-Mercaptoethanol

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

pUC 18 DNA Control Plasmid

No action shall be taken involving any personal risk or without suitable training.

Lysis Buffer

No action shall be taken involving any personal risk or without suitable training.

0.5 M EDTA

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person

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Streptavidin Resin	providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Streptavidin Binding Buffer	No action shall be taken involving any personal risk or without suitable training.
Streptavidin Elution Buffer	No action shall be taken involving any personal risk or without suitable training.
Streptavidin Supernatant Supplement	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
MS-Grade Calmodulin Resin	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Calmodulin Binding Buffer	No action shall be taken involving any personal risk or without suitable training.
Calmodulin Elution Buffer	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact

: β-Mercaptoethanol	Causes serious eye damage.
Adenoviral pCTAP Shuttle Vector - A	No known significant effects or critical hazards.
Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.
pCTAP Shuttle vector-C	No known significant effects or critical hazards.
Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.
pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.
AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.
BJ5183-AD-1 electroporation competent cells	No known significant effects or critical hazards.
Transformation Control	No known significant effects or critical hazards.
XL10-Gold Ultracompetent cells	No known significant effects or critical hazards.
XL10-Gold 2-Mercaptoethanol	Causes serious eye damage.
pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Lysis Buffer	No known significant effects or critical hazards.
0.5 M EDTA	Causes serious eye irritation.
Streptavidin Resin	No known significant effects or critical hazards.
Streptavidin Binding Buffer	No known significant effects or critical hazards.
Streptavidin Elution Buffer	No known significant effects or critical hazards.
Streptavidin Supernatant Supplement	No known significant effects or critical hazards.
MS-Grade Calmodulin Resin	No known significant effects or critical hazards.
Calmodulin Binding Buffer	No known significant effects or critical hazards.
Calmodulin Elution Buffer	No known significant effects or critical hazards.

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Inhalation	:	β-Mercaptoethanol	Toxic if inhaled.	
		Adenoviral pCTAP Shuttle Vector - A	No known significant effects or critical hazards.	
		Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.	
		pCTAP Shuttle vector-C	No known significant effects or critical hazards.	
		Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.	
		pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.	
		AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.	
		BJ5183-AD-1 electroporation competent cells	No known significant effects or critical hazards.	
		Transformation Control XL10-Gold	No known significant effects or critical hazards.	
		Ultracompetent cells XL10-Gold	No known significant effects or critical hazards.	
		2-Mercaptoethanol	No known significant effects or critical hazards.	
		pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.	
		Lysis Buffer	No known significant effects or critical hazards.	
		0.5 M EDTA	No known significant effects or critical hazards.	
		Streptavidin Resin	No known significant effects or critical hazards.	
		Streptavidin Binding Buffer	No known significant effects or critical hazards.	
		Streptavidin Elution Buffer	No known significant effects or critical hazards.	
		Streptavidin Supernatant Supplement	No known significant effects or critical hazards.	
		MS-Grade Calmodulin Resin	No known significant effects or critical hazards.	
		Calmodulin Binding Buffer	No known significant effects or critical hazards.	
		Calmodulin Elution Buffer	No known significant effects or critical hazards.	
	Skin contact	:	β-Mercaptoethanol	Fatal in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
			Adenoviral pCTAP Shuttle Vector - A	No known significant effects or critical hazards.
			Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.
			pCTAP Shuttle vector-C	No known significant effects or critical hazards.
			Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.
			pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.
			AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.
			BJ5183-AD-1 electroporation competent cells	No known significant effects or critical hazards.
			Transformation Control XL10-Gold	No known significant effects or critical hazards.
		Ultracompetent cells XL10-Gold	May cause an allergic skin reaction.	
		2-Mercaptoethanol	No known significant effects or critical hazards.	
		pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.	
		Lysis Buffer	No known significant effects or critical hazards.	
		0.5 M EDTA	No known significant effects or critical hazards.	
		Streptavidin Resin	No known significant effects or critical hazards.	
		Streptavidin Binding	No known significant effects or critical hazards.	

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Ingestion

Buffer		
Streptavidin Elution		No known significant effects or critical hazards.
Buffer		
Streptavidin Supernatant		No known significant effects or critical hazards.
Supplement		
MS-Grade Calmodulin		No known significant effects or critical hazards.
Resin		
Calmodulin Binding		No known significant effects or critical hazards.
Buffer		
Calmodulin Elution Buffer		No known significant effects or critical hazards.
: β-Mercaptoethanol		Toxic if swallowed.
Adenoviral pCTAP		No known significant effects or critical hazards.
Shuttle Vector - A		
Adenoviral pCTAP		No known significant effects or critical hazards.
Shuttle Vector - B		
pCTAP Shuttle vector-C		No known significant effects or critical hazards.
Adenoviral pTAP Shuttle-		No known significant effects or critical hazards.
CAT Vector		
pShuttle-CMV-lacZ		No known significant effects or critical hazards.
Control Vector		
AD-293 Cell Line >1 x		No known significant effects or critical hazards.
10e6 Viable Cells		
BJ5183-AD-1		No known significant effects or critical hazards.
electroporation		
competent cells		
Transformation Control		No known significant effects or critical hazards.
XL10-Gold		No known significant effects or critical hazards.
Ultracompetent cells		
XL10-Gold		No known significant effects or critical hazards.
2-Mercaptoethanol		
pUC 18 DNA Control		No known significant effects or critical hazards.
Plasmid		
Lysis Buffer		No known significant effects or critical hazards.
0.5 M EDTA		No known significant effects or critical hazards.
Streptavidin Resin		No known significant effects or critical hazards.
Streptavidin Binding		No known significant effects or critical hazards.
Buffer		
Streptavidin Elution		No known significant effects or critical hazards.
Buffer		
Streptavidin Supernatant		No known significant effects or critical hazards.
Supplement		
MS-Grade Calmodulin		No known significant effects or critical hazards.
Resin		
Calmodulin Binding		No known significant effects or critical hazards.
Buffer		
Calmodulin Elution Buffer		No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact

: β-Mercaptoethanol		Adverse symptoms may include the following: pain watering redness
Adenoviral pCTAP		No specific data.
Shuttle Vector - A		
Adenoviral pCTAP		No specific data.
Shuttle Vector - B		
pCTAP Shuttle vector-C		No specific data.
Adenoviral pTAP Shuttle-		No specific data.
CAT Vector		
pShuttle-CMV-lacZ		No specific data.
Control Vector		
AD-293 Cell Line >1 x		No specific data.
10e6 Viable Cells		

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	BJ5183-AD-1 electroporation competent cells	No specific data.
	Transformation Control	No specific data.
	XL10-Gold Ultracompetent cells	No specific data.
	XL10-Gold 2-Mercaptoethanol	Adverse symptoms may include the following: pain watering redness
	pUC 18 DNA Control Plasmid	No specific data.
	Lysis Buffer	No specific data.
	0.5 M EDTA	Adverse symptoms may include the following: pain or irritation watering redness
	Streptavidin Resin	No specific data.
	Streptavidin Binding Buffer	No specific data.
	Streptavidin Elution Buffer	No specific data.
	Streptavidin Supernatant Supplement	No specific data.
	MS-Grade Calmodulin Resin	No specific data.
	Calmodulin Binding Buffer	No specific data.
	Calmodulin Elution Buffer	No specific data.
Inhalation	: 2 -Mercaptoethanol	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Adenoviral pCTAP Shuttle Vector - A	No specific data.
	Adenoviral pCTAP Shuttle Vector - B	No specific data.
	pCTAP Shuttle vector-C	No specific data.
	Adenoviral pTAP Shuttle-CAT Vector	No specific data.
	pShuttle-CMV-lacZ Control Vector	No specific data.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No specific data.
	BJ5183-AD-1 electroporation competent cells	No specific data.
	Transformation Control	No specific data.
	XL10-Gold Ultracompetent cells	No specific data.
	XL10-Gold 2-Mercaptoethanol	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	pUC 18 DNA Control Plasmid	No specific data.
	Lysis Buffer	No specific data.
	0.5 M EDTA	No specific data.
	Streptavidin Resin	No specific data.
	Streptavidin Binding Buffer	No specific data.

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Skin contact

Streptavidin Elution Buffer	No specific data.
Streptavidin Supernatant Supplement	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
MS-Grade Calmodulin Resin	No specific data.
Calmodulin Binding Buffer	No specific data.
Calmodulin Elution Buffer	No specific data.
β-Mercaptoethanol	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced foetal weight increase in foetal deaths skeletal malformations
Adenoviral pCTAP Shuttle Vector - A	No specific data.
Adenoviral pCTAP Shuttle Vector - B	No specific data.
pCTAP Shuttle vector-C	No specific data.
Adenoviral pTAP Shuttle-CAT Vector	No specific data.
pShuttle-CMV-lacZ Control Vector	No specific data.
AD-293 Cell Line >1 x 10e6 Viable Cells	No specific data.
BJ5183-AD-1 electroporation competent cells	No specific data.
Transformation Control	No specific data.
XL10-Gold Ultracompetent cells	No specific data.
XL10-Gold 2-Mercaptoethanol	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced foetal weight increase in foetal deaths skeletal malformations
pUC 18 DNA Control Plasmid	No specific data.
Lysis Buffer	No specific data.
0.5 M EDTA	No specific data.
Streptavidin Resin	No specific data.
Streptavidin Binding Buffer	No specific data.
Streptavidin Elution Buffer	No specific data.
Streptavidin Supernatant Supplement	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
MS-Grade Calmodulin Resin	No specific data.
Calmodulin Binding Buffer	No specific data.
Calmodulin Elution Buffer	No specific data.

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Ingestion	: β -Mercaptoethanol	Adverse symptoms may include the following: stomach pains reduced foetal weight increase in foetal deaths skeletal malformations No specific data.
	Adenoviral pCTAP Shuttle Vector - A	No specific data.
	Adenoviral pCTAP Shuttle Vector - B	No specific data.
	pCTAP Shuttle vector-C	No specific data.
	Adenoviral pTAP Shuttle-CAT Vector	No specific data.
	pShuttle-CMV-lacZ Control Vector	No specific data.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No specific data.
	BJ5183-AD-1 electroporation competent cells	No specific data.
	Transformation Control XL10-Gold Ultracompetent cells	No specific data.
	XL10-Gold 2-Mercaptoethanol	Adverse symptoms may include the following: stomach pains reduced foetal weight increase in foetal deaths skeletal malformations No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
	Lysis Buffer	No specific data.
	0.5 M EDTA	No specific data.
	Streptavidin Resin	No specific data.
	Streptavidin Binding Buffer	No specific data.
	Streptavidin Elution Buffer	No specific data.
	Streptavidin Supernatant Supplement	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations No specific data.
	MS-Grade Calmodulin Resin	No specific data.
	Calmodulin Binding Buffer	No specific data.
	Calmodulin Elution Buffer	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: β -Mercaptoethanol	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Adenoviral pCTAP Shuttle Vector - A	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Adenoviral pCTAP Shuttle Vector - B	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pCTAP Shuttle vector-C	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Adenoviral pTAP Shuttle-CAT Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pShuttle-CMV-lacZ Control Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	AD-293 Cell Line >1 x	Treat symptomatically. Contact poison treatment specialist

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10e6 Viable Cells	immediately if large quantities have been ingested or inhaled.
BJ5183-AD-1	Treat symptomatically. Contact poison treatment specialist
electroporation	immediately if large quantities have been ingested or inhaled.
competent cells	
Transformation Control	Treat symptomatically. Contact poison treatment specialist
	immediately if large quantities have been ingested or inhaled.
XL10-Gold	Treat symptomatically. Contact poison treatment specialist
Ultracompetent cells	immediately if large quantities have been ingested or inhaled.
XL10-Gold	Treat symptomatically. Contact poison treatment specialist
2-Mercaptoethanol	immediately if large quantities have been ingested or inhaled.
pUC 18 DNA Control	Treat symptomatically. Contact poison treatment specialist
Plasmid	immediately if large quantities have been ingested or inhaled.
Lysis Buffer	Treat symptomatically. Contact poison treatment specialist
	immediately if large quantities have been ingested or inhaled.
0.5 M EDTA	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Streptavidin Resin	Treat symptomatically. Contact poison treatment specialist
	immediately if large quantities have been ingested or inhaled.
Streptavidin Binding Buffer	Treat symptomatically. Contact poison treatment specialist
	immediately if large quantities have been ingested or inhaled.
Streptavidin Elution Buffer	Treat symptomatically. Contact poison treatment specialist
	immediately if large quantities have been ingested or inhaled.
Streptavidin Supernatant Supplement	Treat symptomatically. Contact poison treatment specialist
	immediately if large quantities have been ingested or inhaled.
MS-Grade Calmodulin Resin	Treat symptomatically. Contact poison treatment specialist
	immediately if large quantities have been ingested or inhaled.
Calmodulin Binding Buffer	Treat symptomatically. Contact poison treatment specialist
	immediately if large quantities have been ingested or inhaled.
Calmodulin Elution Buffer	Treat symptomatically. Contact poison treatment specialist
	immediately if large quantities have been ingested or inhaled.

Specific treatments

: β-Mercaptoethanol	No specific treatment.
Adenoviral pCTAP Shuttle Vector - A	No specific treatment.
Adenoviral pCTAP Shuttle Vector - B	No specific treatment.
pCTAP Shuttle vector-C	No specific treatment.
Adenoviral pTAP Shuttle-CAT Vector	No specific treatment.
pShuttle-CMV-lacZ Control Vector	No specific treatment.
AD-293 Cell Line >1 x 10e6 Viable Cells	No specific treatment.
BJ5183-AD-1	No specific treatment.
electroporation	
competent cells	
Transformation Control	No specific treatment.
XL10-Gold	No specific treatment.
Ultracompetent cells	
XL10-Gold	No specific treatment.
2-Mercaptoethanol	
pUC 18 DNA Control	No specific treatment.
Plasmid	
Lysis Buffer	No specific treatment.
0.5 M EDTA	No specific treatment.
Streptavidin Resin	No specific treatment.
Streptavidin Binding Buffer	No specific treatment.
Streptavidin Elution Buffer	No specific treatment.
Streptavidin Supernatant Supplement	No specific treatment.
MS-Grade Calmodulin	No specific treatment.

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Resin	
Calmodulin Binding Buffer	No specific treatment.
Calmodulin Elution Buffer	No specific treatment.

SECTION 5: Firefighting measures


5.1 Extinguishing media

Suitable extinguishing media	: β-Mercaptoethanol	Use an extinguishing agent suitable for the surrounding fire.	
	Adenoviral pCTAP Shuttle Vector - A	Use an extinguishing agent suitable for the surrounding fire.	
	Adenoviral pCTAP Shuttle Vector - B	Use an extinguishing agent suitable for the surrounding fire.	
	pCTAP Shuttle vector-C	Use an extinguishing agent suitable for the surrounding fire.	
	Adenoviral pTAP Shuttle-CAT Vector	Use an extinguishing agent suitable for the surrounding fire.	
	pShuttle-CMV-lacZ Control Vector	Use an extinguishing agent suitable for the surrounding fire.	
	AD-293 Cell Line >1 x 10e6 Viable Cells	Use an extinguishing agent suitable for the surrounding fire.	
	BJ5183-AD-1 electroporation competent cells	Use an extinguishing agent suitable for the surrounding fire.	
	Transformation Control XL10-Gold	Use an extinguishing agent suitable for the surrounding fire.	
	Ultracompetent cells XL10-Gold	Use an extinguishing agent suitable for the surrounding fire.	
	2-Mercaptoethanol	Use an extinguishing agent suitable for the surrounding fire.	
	pUC 18 DNA Control Plasmid	Use an extinguishing agent suitable for the surrounding fire.	
	Lysis Buffer	Use an extinguishing agent suitable for the surrounding fire.	
	0.5 M EDTA	Use an extinguishing agent suitable for the surrounding fire.	
	Streptavidin Resin	Use dry chemical, CO ₂ , water spray (fog) or foam.	
	Streptavidin Binding Buffer	Use an extinguishing agent suitable for the surrounding fire.	
	Streptavidin Elution Buffer	Use an extinguishing agent suitable for the surrounding fire.	
	Streptavidin Supernatant Supplement	Use an extinguishing agent suitable for the surrounding fire.	
	MS-Grade Calmodulin Resin	Use dry chemical, CO ₂ , water spray (fog) or foam.	
	Calmodulin Binding Buffer	Use an extinguishing agent suitable for the surrounding fire.	
	Calmodulin Elution Buffer	Use an extinguishing agent suitable for the surrounding fire.	
	Unsuitable extinguishing media	: β-Mercaptoethanol	None known.
		Adenoviral pCTAP Shuttle Vector - A	None known.
Adenoviral pCTAP Shuttle Vector - B		None known.	
pCTAP Shuttle vector-C		None known.	
Adenoviral pTAP Shuttle-CAT Vector		None known.	
pShuttle-CMV-lacZ Control Vector		None known.	
AD-293 Cell Line >1 x 10e6 Viable Cells		None known.	
BJ5183-AD-1 electroporation competent cells		None known.	
Transformation Control XL10-Gold		None known.	
Ultracompetent cells XL10-Gold		None known.	

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2-Mercaptoethanol	
pUC 18 DNA Control Plasmid	None known.
Lysis Buffer	None known.
0.5 M EDTA	None known.
Streptavidin Resin	Do not use water jet.
Streptavidin Binding Buffer	None known.
Streptavidin Elution Buffer	None known.
Streptavidin Supernatant Supplement	None known.
MS-Grade Calmodulin Resin	Do not use water jet.
Calmodulin Binding Buffer	None known.
Calmodulin Elution Buffer	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	:  2-Mercaptoethanol	In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	Adenoviral pCTAP Shuttle Vector - A	In a fire or if heated, a pressure increase will occur and the container may burst.
	Adenoviral pCTAP Shuttle Vector - B	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCTAP Shuttle vector-C	In a fire or if heated, a pressure increase will occur and the container may burst.
	Adenoviral pTAP Shuttle-CAT Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pShuttle-CMV-lacZ Control Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	AD-293 Cell Line >1 x 10e6 Viable Cells	In a fire or if heated, a pressure increase will occur and the container may burst.
	BJ5183-AD-1 electroporation competent cells	In a fire or if heated, a pressure increase will occur and the container may burst.
	Transformation Control	In a fire or if heated, a pressure increase will occur and the container may burst.
	XL10-Gold Ultracompetent cells	In a fire or if heated, a pressure increase will occur and the container may burst.
	XL10-Gold	In a fire or if heated, a pressure increase will occur and the container may burst.
	2-Mercaptoethanol	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	pUC 18 DNA Control Plasmid	In a fire or if heated, a pressure increase will occur and the container may burst.
	Lysis Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	0.5 M EDTA	In a fire or if heated, a pressure increase will occur and the container may burst.
	Streptavidin Resin	Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
	Streptavidin Binding Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	Streptavidin Elution	In a fire or if heated, a pressure increase will occur and the

SECTION 5: Firefighting measures

	Buffer	container may burst.
	Streptavidin Supernatant Supplement	In a fire or if heated, a pressure increase will occur and the container may burst.
	MS-Grade Calmodulin Resin	Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
	Calmodulin Binding Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	Calmodulin Elution Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	: β -Mercaptoethanol	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
	Adenoviral pCTAP Shuttle Vector - A	No specific data.
	Adenoviral pCTAP Shuttle Vector - B	No specific data.
	pCTAP Shuttle vector-C	No specific data.
	Adenoviral pTAP Shuttle-CAT Vector	No specific data.
	pShuttle-CMV-lacZ Control Vector	No specific data.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
	BJ5183-AD-1 electroporation competent cells	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Transformation Control XL10-Gold Ultracompetent cells	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides halogenated compounds metal oxide/oxides
	XL10-Gold 2-Mercaptoethanol	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides halogenated compounds metal oxide/oxides
	pUC 18 DNA Control Plasmid	No specific data.
	Lysis Buffer 0.5 M EDTA	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	Streptavidin Resin	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Streptavidin Binding Buffer	No specific data.
	Streptavidin Elution Buffer	No specific data.

SECTION 5: Firefighting measures

Streptavidin Supernatant Supplement	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
MS-Grade Calmodulin Resin	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
Calmodulin Binding Buffer	No specific data.
Calmodulin Elution Buffer	No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters

: β-Mercaptoethanol	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Adenoviral pCTAP Shuttle Vector - A	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Adenoviral pCTAP Shuttle Vector - B	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
pCTAP Shuttle vector-C	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Adenoviral pTAP Shuttle-CAT Vector	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
pShuttle-CMV-lacZ Control Vector	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
AD-293 Cell Line >1 x 10e6 Viable Cells	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
BJ5183-AD-1 electroporation competent cells Transformation Control	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
XL10-Gold Ultracompetent cells	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
XL10-Gold 2-Mercaptoethanol	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
pUC 18 DNA Control Plasmid	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Lysis Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
0.5 M EDTA	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Streptavidin Resin	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

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	Streptavidin Binding Buffer	Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Streptavidin Elution Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Streptavidin Supernatant Supplement	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	MS-Grade Calmodulin Resin	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	Calmodulin Binding Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Calmodulin Elution Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: β -Mercaptoethanol	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	Adenoviral pCTAP Shuttle Vector - A	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	Adenoviral pCTAP Shuttle Vector - B	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	pCTAP Shuttle vector-C	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	Adenoviral pTAP Shuttle-CAT Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	pShuttle-CMV-lacZ Control Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a

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BJ5183-AD-1 electroporation competent cells	basic level of protection for chemical incidents. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Transformation Control	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
XL10-Gold Ultracompetent cells	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
XL10-Gold 2-Mercaptoethanol	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
pUC 18 DNA Control Plasmid	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Lysis Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
0.5 M EDTA	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Streptavidin Resin	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Streptavidin Binding Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Streptavidin Elution Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Streptavidin Supernatant Supplement	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full

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MS-Grade Calmodulin Resin	face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Calmodulin Binding Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Calmodulin Elution Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: β -Mercaptoethanol	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Adenoviral pCTAP Shuttle Vector - A	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Adenoviral pCTAP Shuttle Vector - B	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
pCTAP Shuttle vector-C	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Adenoviral pTAP Shuttle-CAT Vector	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
pShuttle-CMV-lacZ Control Vector	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
AD-293 Cell Line >1 x 10e6 Viable Cells	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

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BJ5183-AD-1 electroporation competent cells	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Transformation Control	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
XL10-Gold Ultracompetent cells	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
XL10-Gold 2-Mercaptoethanol	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
pUC 18 DNA Control Plasmid	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Lysis Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
0.5 M EDTA	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Streptavidin Resin	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Streptavidin Binding Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Streptavidin Elution Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Streptavidin Supernatant Supplement	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear

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For emergency responders

MS-Grade Calmodulin Resin	appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Calmodulin Binding Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Calmodulin Elution Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
: β-Mercaptoethanol	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Adenoviral pCTAP Shuttle Vector - A	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Adenoviral pCTAP Shuttle Vector - B	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
pCTAP Shuttle vector-C	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Adenoviral pTAP Shuttle-CAT Vector	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
pShuttle-CMV-lacZ Control Vector	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
AD-293 Cell Line >1 x 10e6 Viable Cells	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
BJ5183-AD-1 electroporation competent cells	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Transformation Control	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
XL10-Gold Ultracompetent cells	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
XL10-Gold 2-Mercaptoethanol	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and

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pUC 18 DNA Control Plasmid	unsuitable materials. See also the information in "For non-emergency personnel". If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Lysis Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
0.5 M EDTA	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Streptavidin Resin	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Streptavidin Binding Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Streptavidin Elution Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Streptavidin Supernatant Supplement	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
MS-Grade Calmodulin Resin	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Calmodulin Binding Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Calmodulin Elution Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: β-Mercaptoethanol	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
Adenoviral pCTAP Shuttle Vector - A	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Adenoviral pCTAP Shuttle Vector - B	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
pCTAP Shuttle vector-C	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Adenoviral pTAP Shuttle-	Avoid dispersal of spilt material and runoff and contact with

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CAT Vector	soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
pShuttle-CMV-lacZ Control Vector	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
AD-293 Cell Line >1 x 10e6 Viable Cells	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
BJ5183-AD-1 electroporation competent cells	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Transformation Control	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
XL10-Gold Ultracompetent cells	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
XL10-Gold 2-Mercaptoethanol	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
pUC 18 DNA Control Plasmid	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Lysis Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
0.5 M EDTA	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Streptavidin Resin	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Streptavidin Binding Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Streptavidin Elution Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Streptavidin Supernatant Supplement	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
MS-Grade Calmodulin Resin	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Calmodulin Binding Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant

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	authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Calmodulin Elution Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : β-Mercaptoethanol

	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Adenoviral pCTAP Shuttle Vector - A	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Adenoviral pCTAP Shuttle Vector - B	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
pCTAP Shuttle vector-C	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Adenoviral pTAP Shuttle-CAT Vector	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
pShuttle-CMV-lacZ Control Vector	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
AD-293 Cell Line >1 x 10e6 Viable Cells	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
BJ5183-AD-1 electroporation competent cells	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Transformation Control	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
XL10-Gold Ultracompetent cells	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
XL10-Gold 2-Mercaptoethanol	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose

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pUC 18 DNA Control Plasmid	of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Lysis Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. May be harmful to the environment if released. Dispose of spillages under controlled conditions.
0.5 M EDTA	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Streptavidin Resin	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Streptavidin Binding Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. May be harmful to the environment if released. Dispose of spillages under controlled conditions.
Streptavidin Elution Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. May be harmful to the environment if released. Dispose of spillages under controlled conditions.
Streptavidin Supernatant Supplement	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
MS-Grade Calmodulin Resin	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Calmodulin Binding Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. May be harmful to the environment if released. Dispose of spillages under controlled conditions.
Calmodulin Elution Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. May be harmful to the environment if released. Dispose of spillages under controlled conditions.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
- See Section 8 for information on appropriate personal protective equipment.
- See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	: ☒-Mercaptoethanol	Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Adenoviral pCTAP Shuttle Vector - A		Put on appropriate personal protective equipment (see Section 8).
Adenoviral pCTAP Shuttle Vector - B		Put on appropriate personal protective equipment (see Section 8).
pCTAP Shuttle vector-C		Put on appropriate personal protective equipment (see Section 8).
Adenoviral pTAP Shuttle-CAT Vector		Put on appropriate personal protective equipment (see Section 8).
pShuttle-CMV-lacZ Control Vector		Put on appropriate personal protective equipment (see Section 8).
AD-293 Cell Line >1 x 10e6 Viable Cells		Put on appropriate personal protective equipment (see Section 8).
BJ5183-AD-1 electroporation competent cells		Put on appropriate personal protective equipment (see Section 8).
Transformation Control		Put on appropriate personal protective equipment (see Section 8).
XL10-Gold Ultracompetent cells		Put on appropriate personal protective equipment (see Section 8).
XL10-Gold		Put on appropriate personal protective equipment (see Section 8).
2-Mercaptoethanol		Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
pUC 18 DNA Control Plasmid		Put on appropriate personal protective equipment (see Section 8).
Lysis Buffer		Put on appropriate personal protective equipment (see Section 8).
0.5 M EDTA		Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Streptavidin Resin		Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and

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clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Streptavidin Binding Buffer	Put on appropriate personal protective equipment (see Section 8).
Streptavidin Elution Buffer	Put on appropriate personal protective equipment (see Section 8).
Streptavidin Supernatant Supplement	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
MS-Grade Calmodulin Resin	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Calmodulin Binding Buffer	Put on appropriate personal protective equipment (see Section 8).
Calmodulin Elution Buffer	Put on appropriate personal protective equipment (see Section 8).
: β -Mercaptoethanol	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Adenoviral pCTAP Shuttle Vector - A	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Adenoviral pCTAP Shuttle Vector - B	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating,

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pCTAP Shuttle vector-C	drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Adenoviral pTAP Shuttle-CAT Vector	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
pShuttle-CMV-lacZ Control Vector	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
AD-293 Cell Line >1 x 10e6 Viable Cells	Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
BJ5183-AD-1 electroporation competent cells	Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Transformation Control	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
XL10-Gold Ultracompetent cells	Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
XL10-Gold 2-Mercaptoethanol	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
pUC 18 DNA Control Plasmid	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Lysis Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating,

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0.5 M EDTA	drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Streptavidin Resin	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Streptavidin Binding Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Streptavidin Elution Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Streptavidin Supernatant Supplement	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
MS-Grade Calmodulin Resin	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Calmodulin Binding Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Calmodulin Elution Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage	: β -Mercaptoethanol	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for
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Adenoviral pCTAP Shuttle Vector - A	<p>incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Adenoviral pCTAP Shuttle Vector - B	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
pCTAP Shuttle vector-C	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Adenoviral pTAP Shuttle-CAT Vector	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
pShuttle-CMV-lacZ Control Vector	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
AD-293 Cell Line >1 x 10e6 Viable Cells	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
BJ5183-AD-1 electroporation	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and</p>

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competent cells	well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Transformation Control	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
XL10-Gold Ultracompetent cells	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
XL10-Gold 2-Mercaptoethanol	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
pUC 18 DNA Control Plasmid	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Lysis Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
0.5 M EDTA	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have

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Streptavidin Resin	<p>been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p> <p>Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Streptavidin Binding Buffer	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Streptavidin Elution Buffer	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Streptavidin Supernatant Supplement	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
MS-Grade Calmodulin Resin	<p>Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Calmodulin Binding Buffer	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly</p>

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closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Calmodulin Elution Buffer Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
β-Mercaptoethanol H2 E1	50 tonne 100 tonne	200 tonne 200 tonne
Streptavidin Resin P5c	5000 tonne	50000 tonne
MS-Grade Calmodulin Resin P5c	5000 tonne	50000 tonne

7.3 Specific end use(s)

Recommendations

β-Mercaptoethanol	Industrial applications, Professional applications.
Adenoviral pCTAP Shuttle Vector - A	Industrial applications, Professional applications.
Adenoviral pCTAP Shuttle Vector - B	Industrial applications, Professional applications.
pCTAP Shuttle vector-C	Industrial applications, Professional applications.
Adenoviral pTAP Shuttle-CAT Vector	Industrial applications, Professional applications.
pShuttle-CMV-lacZ Control Vector	Industrial applications, Professional applications.
AD-293 Cell Line >1 x 10e6 Viable Cells	Industrial applications, Professional applications.
BJ5183-AD-1 electroporation competent cells	Industrial applications, Professional applications.
Transformation Control	Industrial applications, Professional applications.
XL10-Gold Ultracompetent cells	Industrial applications, Professional applications.
XL10-Gold	Industrial applications, Professional applications.
2-Mercaptoethanol	Industrial applications, Professional applications.
pUC 18 DNA Control Plasmid	Industrial applications, Professional applications.
Lysis Buffer	Industrial applications, Professional applications.
0.5 M EDTA	Industrial applications, Professional applications.
Streptavidin Resin	Industrial applications, Professional applications.
Streptavidin Binding Buffer	Industrial applications, Professional applications.
Streptavidin Elution	Industrial applications, Professional applications.

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Industrial sector specific solutions

Buffer	
Streptavidin Supernatant Supplement	Industrial applications, Professional applications.
MS-Grade Calmodulin Resin	Industrial applications, Professional applications.
Calmodulin Binding Buffer	Industrial applications, Professional applications.
Calmodulin Elution Buffer	Industrial applications, Professional applications.
β-Mercaptoethanol	Not available.
Adenoviral pCTAP Shuttle Vector - A	Not available.
Adenoviral pCTAP Shuttle Vector - B	Not available.
pCTAP Shuttle vector-C	Not available.
Adenoviral pTAP Shuttle-CAT Vector	Not available.
pShuttle-CMV-lacZ Control Vector	Not available.
AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
BJ5183-AD-1 electroporation competent cells	Not available.
Transformation Control XL10-Gold Ultracompetent cells	Not available.
XL10-Gold	Not available.
2-Mercaptoethanol	Not available.
pUC 18 DNA Control Plasmid	Not available.
Lysis Buffer	Not available.
0.5 M EDTA	Not available.
Streptavidin Resin	Not available.
Streptavidin Binding Buffer	Not available.
Streptavidin Elution Buffer	Not available.
Streptavidin Supernatant Supplement	Not available.
MS-Grade Calmodulin Resin	Not available.
Calmodulin Binding Buffer	Not available.
Calmodulin Elution Buffer	Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
BJ5183-AD-1 electroporation competent cells Glycerol	EH40/2005 WELs (United Kingdom (UK), 8/2018). TWA: 10 mg/m ³ 8 hours. Form: Mist
XL10-Gold Ultracompetent cells Glycerol	EH40/2005 WELs (United Kingdom (UK), 8/2018). TWA: 10 mg/m ³ 8 hours. Form: Mist
Sucrose	EH40/2005 WELs (United Kingdom (UK), 8/2018). STEL: 20 mg/m ³ 15 minutes. TWA: 10 mg/m ³ 8 hours.

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SECTION 8: Exposure controls/personal protection

Streptavidin Resin Ethanol	EH40/2005 WELs (United Kingdom (UK), 8/2018). TWA: 1000 ppm 8 hours. TWA: 1920 mg/m ³ 8 hours.
MS-Grade Calmodulin Resin Ethanol	EH40/2005 WELs (United Kingdom (UK), 8/2018). TWA: 1000 ppm 8 hours. TWA: 1920 mg/m ³ 8 hours.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
β-Mercaptoethanol 2-Mercaptoethanol	DNEL	Long term Dermal	0.6 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	4 mg/m ³	Workers	Systemic
XL10-Gold 2-Mercaptoethanol Sodium chloride	DNEL	Short term Oral	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	126.65 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	295.52 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	295.52 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	443.28 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	443.28 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	2068.62 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	2068.62 mg/m ³	Workers	Systemic
2-Mercaptoethanol	DNEL	Long term Dermal	0.6 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	4 mg/m ³	Workers	Systemic
0.5 M EDTA Edetic acid	DNEL	Long term Inhalation	0.6 mg/m ³	General population	Local
	DNEL	Short term Inhalation	1.2 mg/m ³	General population	Local
	DNEL	Long term Inhalation	1.5 mg/m ³	Workers	Local

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SECTION 8: Exposure controls/personal protection

Streptavidin Supernatant Supplement calcium chloride	DNEL	Inhalation Short term	3 mg/m ³	Workers	Local	
	DNEL	Inhalation Long term Oral	25 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	2.5 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	2.5 mg/m ³	General population	Systemic	
	DNEL	Short term Inhalation	5 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	5 mg/m ³	Workers	Local	
	DNEL	Long term Inhalation	5 mg/m ³	Workers	Systemic	
	DNEL	Short term Inhalation	10 mg/m ³	Workers	Local	
	Imidazole	DNEL	Long term Dermal	1.5 mg/kg bw/day	Workers	Systemic
		DNEL	Long term Inhalation	10.6 mg/m ³	Workers	Systemic
MS-Grade Calmodulin Resin Sodium chloride	DNEL	Short term Oral	126.65 mg/ kg bw/day	General population	Systemic	
	DNEL	Long term Oral	126.65 mg/ kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	126.65 mg/ kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	126.65 mg/ kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	295.52 mg/ kg bw/day	Workers	Systemic	
	DNEL	Long term Dermal	295.52 mg/ kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	443.28 mg/ m ³	General population	Systemic	
	DNEL	Long term Inhalation	443.28 mg/ m ³	General population	Systemic	
	DNEL	Short term Inhalation	2068.62 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	2068.62 mg/m ³	Workers	Systemic	

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

SECTION 8: Exposure controls/personal protection

- Hygiene measures** : Handle as biohazard material (Biosafety level 1). Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	β-Mercaptoethanol	Liquid.
		Adenoviral pCTAP Shuttle Vector - A	Liquid.
		Adenoviral pCTAP Shuttle Vector - B	Liquid.
		pCTAP Shuttle vector-C	Liquid.
		Adenoviral pTAP Shuttle-CAT Vector	Liquid.
		pShuttle-CMV-lacZ Control Vector	Liquid.
		AD-293 Cell Line >1 x 10e6 Viable Cells	Liquid.
		BJ5183-AD-1 electroporation competent cells	Liquid.
		Transformation Control	Liquid.
		XL10-Gold Ultracompetent cells	Liquid.
		XL10-Gold 2-Mercaptoethanol	Liquid.

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	pUC 18 DNA Control Plasmid	Liquid.
	Lysis Buffer	Liquid.
	0.5 M EDTA	Liquid.
	Streptavidin Resin	Liquid.
	Streptavidin Binding Buffer	Liquid.
	Streptavidin Elution Buffer	Liquid.
	Streptavidin Supernatant Supplement	Liquid.
	MS-Grade Calmodulin Resin	Liquid.
	Calmodulin Binding Buffer	Liquid.
	Calmodulin Elution Buffer	Liquid.
Colour	: β-Mercaptoethanol	Colourless.
	Adenoviral pCTAP Shuttle Vector - A	Not available.
	Adenoviral pCTAP Shuttle Vector - B	Not available.
	pCTAP Shuttle vector-C	Not available.
	Adenoviral pTAP Shuttle-CAT Vector	Not available.
	pShuttle-CMV-lacZ Control Vector	Not available.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
	BJ5183-AD-1 electroporation competent cells	Not available.
	Transformation Control	Not available.
	XL10-Gold Ultracompetent cells	Not available.
	XL10-Gold 2-Mercaptoethanol	Not available.
	pUC 18 DNA Control Plasmid	Not available.
	Lysis Buffer	Not available.
	0.5 M EDTA	Not available.
	Streptavidin Resin	Not available.
	Streptavidin Binding Buffer	Not available.
	Streptavidin Elution Buffer	Not available.
	Streptavidin Supernatant Supplement	Not available.
	MS-Grade Calmodulin Resin	Not available.
	Calmodulin Binding Buffer	Not available.
	Calmodulin Elution Buffer	Not available.

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SECTION 9: Physical and chemical properties

Odour	:	β-Mercaptoethanol	Characteristic.
		Adenoviral pCTAP Shuttle Vector - A	Not available.
		Adenoviral pCTAP Shuttle Vector - B	Not available.
		pCTAP Shuttle vector-C	Not available.
		Adenoviral pTAP Shuttle-CAT Vector	Not available.
		pShuttle-CMV-lacZ Control Vector	Not available.
		AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
		BJ5183-AD-1 electroporation competent cells	Not available.
		Transformation Control	Not available.
		XL10-Gold Ultracompetent cells	Not available.
		XL10-Gold	Not available.
		2-Mercaptoethanol	Not available.
		pUC 18 DNA Control Plasmid	Not available.
		Lysis Buffer	Not available.
		0.5 M EDTA	Not available.
		Streptavidin Resin	Not available.
		Streptavidin Binding Buffer	Not available.
		Streptavidin Elution Buffer	Not available.
		Streptavidin Supernatant	Not available.
		Supplement	Not available.
		MS-Grade Calmodulin Resin	Not available.
		Calmodulin Binding Buffer	Not available.
		Calmodulin Elution Buffer	Not available.
Odour threshold	:	β-Mercaptoethanol	Not available.
		Adenoviral pCTAP Shuttle Vector - A	Not available.
		Adenoviral pCTAP Shuttle Vector - B	Not available.
		pCTAP Shuttle vector-C	Not available.
		Adenoviral pTAP Shuttle-CAT Vector	Not available.
		pShuttle-CMV-lacZ Control Vector	Not available.
		AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
		BJ5183-AD-1 electroporation competent cells	Not available.
		Transformation Control	Not available.
		XL10-Gold Ultracompetent cells	Not available.
		XL10-Gold	Not available.
		2-Mercaptoethanol	Not available.
		pUC 18 DNA Control Plasmid	Not available.
		Lysis Buffer	Not available.
		0.5 M EDTA	Not available.
		Streptavidin Resin	Not available.

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SECTION 9: Physical and chemical properties

	Streptavidin Binding Buffer	Not available.
	Streptavidin Elution Buffer	Not available.
	Streptavidin Supernatant Supplement	Not available.
	MS-Grade Calmodulin Resin	Not available.
	Calmodulin Binding Buffer	Not available.
	Calmodulin Elution Buffer	Not available.
pH	: β-Mercaptoethanol	Not available.
	Adenoviral pCTAP	7.5
	Shuttle Vector - A	
	Adenoviral pCTAP	7.5
	Shuttle Vector - B	
	pCTAP Shuttle vector-C	7.5
	Adenoviral pTAP	7.5
	Shuttle-CAT Vector	
	pShuttle-CMV-lacZ	7.5
	Control Vector	
	AD-293 Cell Line >1 x 10e6 Viable Cells	7.5
	BJ5183-AD-1 electroporation competent cells	Not available.
	Transformation Control	7.5
	XL10-Gold	6.4
	Ultracompetent cells	
	XL10-Gold	Not available.
	2-Mercaptoethanol	
	pUC 18 DNA Control Plasmid	7.5
	Lysis Buffer	8
	0.5 M EDTA	8
	Streptavidin Resin	7.5
	Streptavidin Binding Buffer	8
	Streptavidin Elution Buffer	8
	Streptavidin Supernatant Supplement	Not available.
	MS-Grade Calmodulin Resin	7.5
	Calmodulin Binding Buffer	8
	Calmodulin Elution Buffer	8
Melting point/freezing point	: β-Mercaptoethanol	<-100°C
	Adenoviral pCTAP	0°C
	Shuttle Vector - A	
	Adenoviral pCTAP	0°C
	Shuttle Vector - B	
	pCTAP Shuttle vector-C	0°C
	Adenoviral pTAP	0°C
	Shuttle-CAT Vector	
	pShuttle-CMV-lacZ	0°C
	Control Vector	
	AD-293 Cell Line >1 x	Not available.

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SECTION 9: Physical and chemical properties

	10e6 Viable Cells	
	BJ5183-AD-1	Not available.
	electroporation	
	competent cells	
	Transformation Control	0°C
	XL10-Gold	Not available.
	Ultracompetent cells	
	XL10-Gold	Not available.
	2-Mercaptoethanol	
	pUC 18 DNA Control	0°C
	Plasmid	
	Lysis Buffer	0°C
	0.5 M EDTA	Not available.
	Streptavidin Resin	Not available.
	Streptavidin Binding	0°C
	Buffer	
	Streptavidin Elution	0°C
	Buffer	
	Streptavidin	0°C
	Supernatant	
	Supplement	
	MS-Grade Calmodulin	Not available.
	Resin	
	Calmodulin Binding	0°C
	Buffer	
	Calmodulin Elution	0°C
	Buffer	
Initial boiling point and boiling range	: β-Mercaptoethanol	155.8°C
	Adenoviral pCTAP	100°C
	Shuttle Vector - A	
	Adenoviral pCTAP	100°C
	Shuttle Vector - B	
	pCTAP Shuttle vector-C	100°C
	Adenoviral pTAP	100°C
	Shuttle-CAT Vector	
	pShuttle-CMV-lacZ	100°C
	Control Vector	
	AD-293 Cell Line >1 x	Not available.
	10e6 Viable Cells	
	BJ5183-AD-1	Not available.
	electroporation	
	competent cells	
	Transformation Control	100°C
	XL10-Gold	Not available.
	Ultracompetent cells	
	XL10-Gold	Not available.
	2-Mercaptoethanol	
pUC 18 DNA Control	100°C	
Plasmid		
Lysis Buffer	100°C	
0.5 M EDTA	Not available.	
Streptavidin Resin	Not available.	
Streptavidin Binding	100°C	
Buffer		
Streptavidin Elution	100°C	
Buffer		
Streptavidin	100°C	
Supernatant		
Supplement		
MS-Grade Calmodulin	Not available.	
Resin		
Calmodulin Binding	100°C	
Buffer		

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SECTION 9: Physical and chemical properties

	Calmodulin Elution Buffer	100°C
Flash point	: β-Mercaptoethanol	Closed cup: 74°C Open cup: 74°C
	Adenoviral pCTAP Shuttle Vector - A	Not available.
	Adenoviral pCTAP Shuttle Vector - B	Not available.
	pCTAP Shuttle vector-C	Not available.
	Adenoviral pTAP Shuttle-CAT Vector	Not available.
	pShuttle-CMV-lacZ	Not available.
	Control Vector	
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
	BJ5183-AD-1 electroporation competent cells	Not available.
	Transformation Control	Not available.
	XL10-Gold	Not available.
	Ultracompetent cells	
	XL10-Gold	Not available.
	2-Mercaptoethanol	
	pUC 18 DNA Control Plasmid	Not available.
	Lysis Buffer	Not available.
	0.5 M EDTA	Not available.
	Streptavidin Resin	Closed cup: 37.8 to 61°C
	Streptavidin Binding Buffer	Not available.
	Streptavidin Elution Buffer	Not available.
	Streptavidin Supernatant	Not available.
	Supplement	
	MS-Grade Calmodulin Resin	Closed cup: 37.8 to 61°C
	Calmodulin Binding Buffer	Not available.
	Calmodulin Elution Buffer	Not available.
Evaporation rate	: β-Mercaptoethanol	Not available.
	Adenoviral pCTAP Shuttle Vector - A	Not available.
	Adenoviral pCTAP Shuttle Vector - B	Not available.
	pCTAP Shuttle vector-C	Not available.
	Adenoviral pTAP Shuttle-CAT Vector	Not available.
	pShuttle-CMV-lacZ	Not available.
	Control Vector	
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
	BJ5183-AD-1 electroporation competent cells	Not available.
	Transformation Control	Not available.
	XL10-Gold	Not available.
	Ultracompetent cells	
	XL10-Gold	Not available.
	2-Mercaptoethanol	
	pUC 18 DNA Control	Not available.

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SECTION 9: Physical and chemical properties

	Plasmid	
	Lysis Buffer	Not available.
	0.5 M EDTA	Not available.
	Streptavidin Resin	Not available.
	Streptavidin Binding Buffer	Not available.
	Streptavidin Elution Buffer	Not available.
	Streptavidin Supernatant Supplement	Not available.
	MS-Grade Calmodulin Resin	Not available.
	Calmodulin Binding Buffer	Not available.
	Calmodulin Elution Buffer	Not available.
Flammability (solid, gas)	: β-Mercaptoethanol	Not applicable.
	Adenoviral pCTAP Shuttle Vector - A	Not applicable.
	Adenoviral pCTAP Shuttle Vector - B	Not applicable.
	pCTAP Shuttle vector- C	Not applicable.
	Adenoviral pTAP Shuttle-CAT Vector	Not applicable.
	pShuttle-CMV-lacZ Control Vector	Not applicable.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not applicable.
	BJ5183-AD-1 electroporation competent cells	Not applicable.
	Transformation Control	Not applicable.
	XL10-Gold Ultracompetent cells	Not applicable.
	XL10-Gold	Not applicable.
	2-Mercaptoethanol	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.
	Lysis Buffer	Not applicable.
	0.5 M EDTA	Not applicable.
	Streptavidin Resin	Not applicable.
	Streptavidin Binding Buffer	Not applicable.
	Streptavidin Elution Buffer	Not applicable.
	Streptavidin Supernatant Supplement	Not applicable.
	MS-Grade Calmodulin Resin	Not applicable.
	Calmodulin Binding Buffer	Not applicable.
	Calmodulin Elution Buffer	Not applicable.

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SECTION 9: Physical and chemical properties

Upper/lower flammability or explosive limits	: β -Mercaptoethanol	Lower: 2.3% Upper: 18%
	Adenoviral pCTAP Shuttle Vector - A	Not available.
	Adenoviral pCTAP Shuttle Vector - B	Not available.
	pCTAP Shuttle vector-C	Not available.
	Adenoviral pTAP Shuttle-CAT Vector	Not available.
	pShuttle-CMV-lacZ	Not available.
	Control Vector	Not available.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
	BJ5183-AD-1 electroporation competent cells	Not available.
	Transformation Control	Not available.
	XL10-Gold Ultracompetent cells	Not available.
	XL10-Gold	Not available.
	2-Mercaptoethanol	Not available.
	pUC 18 DNA Control Plasmid	Not available.
	Lysis Buffer	Not available.
	0.5 M EDTA	Not available.
	Streptavidin Resin	Not available.
	Streptavidin Binding Buffer	Not available.
	Streptavidin Elution Buffer	Not available.
	Streptavidin Supernatant	Not available.
	Supplement	Not available.
	MS-Grade Calmodulin Resin	Not available.
	Calmodulin Binding Buffer	Not available.
	Calmodulin Elution Buffer	Not available.
Vapour pressure	: β -Mercaptoethanol	0.13 kPa [room temperature]
	Adenoviral pCTAP Shuttle Vector - A	Not available.
	Adenoviral pCTAP Shuttle Vector - B	Not available.
	pCTAP Shuttle vector-C	Not available.
	Adenoviral pTAP Shuttle-CAT Vector	Not available.
	pShuttle-CMV-lacZ	Not available.
	Control Vector	Not available.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
	BJ5183-AD-1 electroporation competent cells	Not available.
	Transformation Control	Not available.
	XL10-Gold Ultracompetent cells	Not available.
	XL10-Gold	Not available.
	2-Mercaptoethanol	Not available.
	pUC 18 DNA Control Plasmid	Not available.
	Lysis Buffer	Not available.

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SECTION 9: Physical and chemical properties

	0.5 M EDTA	Not available.
	Streptavidin Resin	Not available.
	Streptavidin Binding Buffer	Not available.
	Streptavidin Elution Buffer	Not available.
	Streptavidin Supernatant Supplement	Not available.
	MS-Grade Calmodulin Resin	Not available.
	Calmodulin Binding Buffer	Not available.
	Calmodulin Elution Buffer	Not available.
Vapour density	: β -Mercaptoethanol	2.7 [Air = 1]
	Adenoviral pCTAP Shuttle Vector - A	Not available.
	Adenoviral pCTAP Shuttle Vector - B	Not available.
	pCTAP Shuttle vector-C	Not available.
	Adenoviral pTAP Shuttle-CAT Vector	Not available.
	pShuttle-CMV-lacZ Control Vector	Not available.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
	BJ5183-AD-1 electroporation competent cells	Not available.
	Transformation Control XL10-Gold	Not available.
	Ultracompetent cells XL10-Gold	Not available.
	2-Mercaptoethanol pUC 18 DNA Control Plasmid	Not available.
	Lysis Buffer	Not available.
	0.5 M EDTA	Not available.
	Streptavidin Resin	Not available.
	Streptavidin Binding Buffer	Not available.
	Streptavidin Elution Buffer	Not available.
	Streptavidin Supernatant Supplement	Not available.
	MS-Grade Calmodulin Resin	Not available.
	Calmodulin Binding Buffer	Not available.
	Calmodulin Elution Buffer	Not available.
Relative density	: β -Mercaptoethanol	1.1
	Adenoviral pCTAP Shuttle Vector - A	Not available.
	Adenoviral pCTAP Shuttle Vector - B	Not available.
	pCTAP Shuttle vector-C	Not available.
	Adenoviral pTAP Shuttle-CAT Vector	Not available.
	pShuttle-CMV-lacZ	Not available.

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SECTION 9: Physical and chemical properties

Control Vector	
AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
BJ5183-AD-1 electroporation competent cells	Not available.
Transformation Control	Not available.
XL10-Gold Ultracompetent cells	Not available.
XL10-Gold 2-Mercaptoethanol	Not available.
pUC 18 DNA Control Plasmid	Not available.
Lysis Buffer	Not available.
0.5 M EDTA	Not available.
Streptavidin Resin	Not available.
Streptavidin Binding Buffer	Not available.
Streptavidin Elution Buffer	Not available.
Streptavidin Supernatant Supplement	Not available.
MS-Grade Calmodulin Resin	Not available.
Calmodulin Binding Buffer	Not available.
Calmodulin Elution Buffer	Not available.

Solubility(ies)

: β-Mercaptoethanol	Easily soluble in the following materials: cold water and hot water.
Adenoviral pCTAP Shuttle Vector - A	Easily soluble in the following materials: cold water and hot water.
Adenoviral pCTAP Shuttle Vector - B	Easily soluble in the following materials: cold water and hot water.
pCTAP Shuttle vector-C	Easily soluble in the following materials: cold water and hot water.
Adenoviral pTAP Shuttle-CAT Vector	Easily soluble in the following materials: cold water and hot water.
pShuttle-CMV-lacZ Control Vector	Easily soluble in the following materials: cold water and hot water.
AD-293 Cell Line >1 x 10e6 Viable Cells	Easily soluble in the following materials: cold water and hot water.
BJ5183-AD-1 electroporation competent cells	Soluble in the following materials: cold water and hot water.
Transformation Control	Easily soluble in the following materials: cold water and hot water.
XL10-Gold Ultracompetent cells	Soluble in the following materials: cold water and hot water.
XL10-Gold 2-Mercaptoethanol	Easily soluble in the following materials: cold water and hot water.
pUC 18 DNA Control Plasmid	Easily soluble in the following materials: cold water and hot water.
Lysis Buffer	Easily soluble in the following materials: cold water and hot water.
0.5 M EDTA	Soluble in the following materials: cold water and hot water.
Streptavidin Resin	Soluble in the following materials: cold water and hot water.
Streptavidin Binding Buffer	Easily soluble in the following materials: cold water and hot water.
Streptavidin Elution	Easily soluble in the following materials: cold water and hot water.

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SECTION 9: Physical and chemical properties

	Buffer	hot water.
	Streptavidin	Easily soluble in the following materials: cold water and hot water.
	Supernatant	hot water.
	Supplement	
	MS-Grade Calmodulin Resin	Soluble in the following materials: cold water and hot water.
	Calmodulin Binding Buffer	Easily soluble in the following materials: cold water and hot water.
	Calmodulin Elution Buffer	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: β -Mercaptoethanol	-0.056
	Adenoviral pCTAP Shuttle Vector - A	Not available.
	Adenoviral pCTAP Shuttle Vector - B	Not available.
	pCTAP Shuttle vector-C	Not available.
	Adenoviral pTAP Shuttle-CAT Vector	Not available.
	pShuttle-CMV-lacZ Control Vector	Not available.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
	BJ5183-AD-1 electroporation competent cells	Not available.
	Transformation Control XL10-Gold	Not available.
	Ultracompetent cells XL10-Gold	Not available.
	2-Mercaptoethanol pUC 18 DNA Control Plasmid	Not available.
	Lysis Buffer	Not available.
	0.5 M EDTA	Not available.
	Streptavidin Resin	Not available.
	Streptavidin Binding Buffer	Not available.
	Streptavidin Elution Buffer	Not available.
	Streptavidin Supernatant	Not available.
	Streptavidin Supplement	Not available.
	MS-Grade Calmodulin Resin	Not available.
	Calmodulin Binding Buffer	Not available.
	Calmodulin Elution Buffer	Not available.
Auto-ignition temperature	: β -Mercaptoethanol	295°C
	Adenoviral pCTAP Shuttle Vector - A	Not available.
	Adenoviral pCTAP Shuttle Vector - B	Not available.
	pCTAP Shuttle vector-C	Not available.
	Adenoviral pTAP Shuttle-CAT Vector	Not available.
	pShuttle-CMV-lacZ Control Vector	Not available.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
	BJ5183-AD-1 electroporation	Not available.

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SECTION 9: Physical and chemical properties

	competent cells	
	Transformation Control	Not available.
	XL10-Gold	Not available.
	Ultracompetent cells	
	XL10-Gold	Not available.
	2-Mercaptoethanol	
	pUC 18 DNA Control	Not available.
	Plasmid	
	Lysis Buffer	Not available.
	0.5 M EDTA	Not available.
	Streptavidin Resin	Not available.
	Streptavidin Binding	Not available.
	Buffer	
	Streptavidin Elution	Not available.
	Buffer	
	Streptavidin	Not available.
	Supernatant	
	Supplement	
	MS-Grade Calmodulin	Not available.
	Resin	
	Calmodulin Binding	Not available.
	Buffer	
	Calmodulin Elution	Not available.
	Buffer	
Decomposition temperature	: β-Mercaptoethanol	Not available.
	Adenoviral pCTAP	Not available.
	Shuttle Vector - A	
	Adenoviral pCTAP	Not available.
	Shuttle Vector - B	
	pCTAP Shuttle vector-C	Not available.
	Adenoviral pTAP	Not available.
	Shuttle-CAT Vector	
	pShuttle-CMV-lacZ	Not available.
	Control Vector	
	AD-293 Cell Line >1 x	Not available.
	10e6 Viable Cells	
	BJ5183-AD-1	Not available.
	electroporation	
	competent cells	
	Transformation Control	Not available.
	XL10-Gold	Not available.
	Ultracompetent cells	
	XL10-Gold	Not available.
	2-Mercaptoethanol	
	pUC 18 DNA Control	Not available.
	Plasmid	
	Lysis Buffer	Not available.
	0.5 M EDTA	Not available.
	Streptavidin Resin	Not available.
	Streptavidin Binding	Not available.
	Buffer	
	Streptavidin Elution	Not available.
	Buffer	
	Streptavidin	Not available.
	Supernatant	
	Supplement	
	MS-Grade Calmodulin	Not available.
	Resin	
	Calmodulin Binding	Not available.
	Buffer	
	Calmodulin Elution	Not available.
	Buffer	

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SECTION 9: Physical and chemical properties

Viscosity	:	β-Mercaptoethanol	Dynamic (room temperature): 3.43 mPa·s
		Adenoviral pCTAP Shuttle Vector - A	Not available.
		Adenoviral pCTAP Shuttle Vector - B	Not available.
		pCTAP Shuttle vector-C	Not available.
		Adenoviral pTAP Shuttle-CAT Vector	Not available.
		pShuttle-CMV-lacZ Control Vector	Not available.
		AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
		BJ5183-AD-1 electroporation competent cells	Not available.
		Transformation Control	Not available.
		XL10-Gold Ultracompetent cells	Not available.
		XL10-Gold	Not available.
		2-Mercaptoethanol	Not available.
		pUC 18 DNA Control Plasmid	Not available.
		Lysis Buffer	Not available.
		0.5 M EDTA	Not available.
		Streptavidin Resin	Not available.
		Streptavidin Binding Buffer	Not available.
		Streptavidin Elution Buffer	Not available.
		Streptavidin Supernatant	Not available.
		Supplement	Not available.
		MS-Grade Calmodulin Resin	Not available.
		Calmodulin Binding Buffer	Not available.
		Calmodulin Elution Buffer	Not available.
Explosive properties	:	β-Mercaptoethanol	Not available.
		Adenoviral pCTAP Shuttle Vector - A	Not available.
		Adenoviral pCTAP Shuttle Vector - B	Not available.
		pCTAP Shuttle vector-C	Not available.
		Adenoviral pTAP Shuttle-CAT Vector	Not available.
		pShuttle-CMV-lacZ Control Vector	Not available.
		AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
		BJ5183-AD-1 electroporation competent cells	Not available.
		Transformation Control	Not available.
		XL10-Gold Ultracompetent cells	Not available.
		XL10-Gold	Not available.
		2-Mercaptoethanol	Not available.
		pUC 18 DNA Control Plasmid	Not available.
		Lysis Buffer	Not available.
		0.5 M EDTA	Not available.
		Streptavidin Resin	Not available.

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SECTION 9: Physical and chemical properties

	Streptavidin Binding Buffer	Not available.
	Streptavidin Elution Buffer	Not available.
	Streptavidin Supernatant Supplement	Not available.
	MS-Grade Calmodulin Resin	Not available.
	Calmodulin Binding Buffer	Not available.
	Calmodulin Elution Buffer	Not available.
Oxidising properties	: β -Mercaptoethanol	Not available.
	Adenoviral pCTAP Shuttle Vector - A	Not available.
	Adenoviral pCTAP Shuttle Vector - B	Not available.
	pCTAP Shuttle vector-C	Not available.
	Adenoviral pTAP Shuttle-CAT Vector	Not available.
	pShuttle-CMV-lacZ Control Vector	Not available.
	AD-293 Cell Line >1 x 10e6 Viable Cells	Not available.
	BJ5183-AD-1 electroporation competent cells	Not available.
	Transformation Control XL10-Gold	Not available.
	Ultracompetent cells XL10-Gold	Not available.
	2-Mercaptoethanol	Not available.
	pUC 18 DNA Control Plasmid	Not available.
	Lysis Buffer	Not available.
	0.5 M EDTA	Not available.
	Streptavidin Resin	Not available.
	Streptavidin Binding Buffer	Not available.
	Streptavidin Elution Buffer	Not available.
	Streptavidin Supernatant Supplement	Not available.
	MS-Grade Calmodulin Resin	Not available.
	Calmodulin Binding Buffer	Not available.
	Calmodulin Elution Buffer	Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: β -Mercaptoethanol	No specific test data related to reactivity available for this product or its ingredients.
	Adenoviral pCTAP Shuttle Vector - A	No specific test data related to reactivity available for this product or its ingredients.
	Adenoviral pCTAP Shuttle Vector - B	No specific test data related to reactivity available for this product or its ingredients.
	pCTAP Shuttle vector-C	No specific test data related to reactivity available for this product or its ingredients.
	Adenoviral pTAP Shuttle-CAT Vector	No specific test data related to reactivity available for this product or its ingredients.
	pShuttle-CMV-lacZ Control Vector	No specific test data related to reactivity available for this product or its ingredients.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No specific test data related to reactivity available for this product or its ingredients.
	BJ5183-AD-1 electroporation competent cells	No specific test data related to reactivity available for this product or its ingredients.
	Transformation Control	No specific test data related to reactivity available for this product or its ingredients.
	XL10-Gold Ultracompetent cells	No specific test data related to reactivity available for this product or its ingredients.
	XL10-Gold 2-Mercaptoethanol	No specific test data related to reactivity available for this product or its ingredients.
	pUC 18 DNA Control Plasmid	No specific test data related to reactivity available for this product or its ingredients.
	Lysis Buffer	No specific test data related to reactivity available for this product or its ingredients.
	0.5 M EDTA	No specific test data related to reactivity available for this product or its ingredients.
	Streptavidin Resin	No specific test data related to reactivity available for this product or its ingredients.
	Streptavidin Binding Buffer	No specific test data related to reactivity available for this product or its ingredients.
	Streptavidin Elution Buffer	No specific test data related to reactivity available for this product or its ingredients.
	Streptavidin Supernatant Supplement	No specific test data related to reactivity available for this product or its ingredients.
	MS-Grade Calmodulin Resin	No specific test data related to reactivity available for this product or its ingredients.
	Calmodulin Binding Buffer	No specific test data related to reactivity available for this product or its ingredients.
	Calmodulin Elution Buffer	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: β -Mercaptoethanol	The product is stable.
	Adenoviral pCTAP Shuttle Vector - A	The product is stable.
	Adenoviral pCTAP Shuttle Vector - B	The product is stable.
	pCTAP Shuttle vector-C	The product is stable.
	Adenoviral pTAP Shuttle-CAT Vector	The product is stable.
	pShuttle-CMV-lacZ Control Vector	The product is stable.
	AD-293 Cell Line >1 x 10e6 Viable Cells	The product is stable.
	BJ5183-AD-1 electroporation competent cells	The product is stable.
	Transformation Control	The product is stable.
	XL10-Gold Ultracompetent cells	The product is stable.

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XL10-Gold	The product is stable.
2-Mercaptoethanol	
pUC 18 DNA Control	The product is stable.
Plasmid	
Lysis Buffer	The product is stable.
0.5 M EDTA	The product is stable.
Streptavidin Resin	The product is stable.
Streptavidin Binding Buffer	The product is stable.
Streptavidin Elution Buffer	The product is stable.
Streptavidin Supernatant Supplement	The product is stable.
MS-Grade Calmodulin Resin	The product is stable.
Calmodulin Binding Buffer	The product is stable.
Calmodulin Elution Buffer	The product is stable.

10.3 Possibility of hazardous reactions

: β-Mercaptoethanol	Under normal conditions of storage and use, hazardous reactions will not occur.
Adenoviral pCTAP Shuttle Vector - A	Under normal conditions of storage and use, hazardous reactions will not occur.
Adenoviral pCTAP Shuttle Vector - B	Under normal conditions of storage and use, hazardous reactions will not occur.
pCTAP Shuttle vector-C	Under normal conditions of storage and use, hazardous reactions will not occur.
Adenoviral pTAP Shuttle-CAT Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
pShuttle-CMV-lacZ Control Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
AD-293 Cell Line >1 x 10e6 Viable Cells	Under normal conditions of storage and use, hazardous reactions will not occur.
BJ5183-AD-1 electroporation competent cells	Under normal conditions of storage and use, hazardous reactions will not occur.
Transformation Control	Under normal conditions of storage and use, hazardous reactions will not occur.
XL10-Gold Ultracompetent cells	Under normal conditions of storage and use, hazardous reactions will not occur.
XL10-Gold	Under normal conditions of storage and use, hazardous reactions will not occur.
2-Mercaptoethanol	Under normal conditions of storage and use, hazardous reactions will not occur.
pUC 18 DNA Control	Under normal conditions of storage and use, hazardous reactions will not occur.
Plasmid	Under normal conditions of storage and use, hazardous reactions will not occur.
Lysis Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
0.5 M EDTA	Under normal conditions of storage and use, hazardous reactions will not occur.
Streptavidin Resin	Under normal conditions of storage and use, hazardous reactions will not occur.
Streptavidin Binding Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
Streptavidin Elution Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
Streptavidin Supernatant Supplement	Under normal conditions of storage and use, hazardous reactions will not occur.
MS-Grade Calmodulin Resin	Under normal conditions of storage and use, hazardous reactions will not occur.
Calmodulin Binding Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
Calmodulin Elution Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.

SECTION 10: Stability and reactivity

10.4 Conditions to avoid	: β-Mercaptoethanol	No specific data.
	Adenoviral pCTAP Shuttle Vector - A	No specific data.
	Adenoviral pCTAP Shuttle Vector - B	No specific data.
	pCTAP Shuttle vector-C	No specific data.
	Adenoviral pTAP Shuttle-CAT Vector	No specific data.
	pShuttle-CMV-lacZ Control Vector	No specific data.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No specific data.
	BJ5183-AD-1 electroporation competent cells	No specific data.
	Transformation Control	No specific data.
	XL10-Gold Ultracompetent cells	No specific data.
	XL10-Gold 2-Mercaptoethanol	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
	Lysis Buffer	No specific data.
	0.5 M EDTA	No specific data.
	Streptavidin Resin	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
	Streptavidin Binding Buffer	No specific data.
	Streptavidin Elution Buffer	No specific data.
	Streptavidin Supernatant Supplement	No specific data.
	MS-Grade Calmodulin Resin	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
	Calmodulin Binding Buffer	No specific data.
Calmodulin Elution Buffer	No specific data.	
10.5 Incompatible materials	: β-Mercaptoethanol	May react or be incompatible with oxidising materials.
	Adenoviral pCTAP Shuttle Vector - A	May react or be incompatible with oxidising materials.
	Adenoviral pCTAP Shuttle Vector - B	May react or be incompatible with oxidising materials.
	pCTAP Shuttle vector-C	May react or be incompatible with oxidising materials.
	Adenoviral pTAP Shuttle-CAT Vector	May react or be incompatible with oxidising materials.
	pShuttle-CMV-lacZ Control Vector	May react or be incompatible with oxidising materials.
	AD-293 Cell Line >1 x 10e6 Viable Cells	May react or be incompatible with oxidising materials.
	BJ5183-AD-1 electroporation competent cells	May react or be incompatible with oxidising materials.
	Transformation Control	May react or be incompatible with oxidising materials.
	XL10-Gold Ultracompetent cells	May react or be incompatible with oxidising materials.
	XL10-Gold 2-Mercaptoethanol	May react or be incompatible with oxidising materials.
	pUC 18 DNA Control	May react or be incompatible with oxidising materials.

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Plasmid	
Lysis Buffer	May react or be incompatible with oxidising materials.
0.5 M EDTA	May react or be incompatible with oxidising materials.
Streptavidin Resin	Reactive or incompatible with the following materials: oxidising materials
Streptavidin Binding Buffer	May react or be incompatible with oxidising materials.
Streptavidin Elution Buffer	May react or be incompatible with oxidising materials.
Streptavidin Supernatant Supplement	May react or be incompatible with oxidising materials.
MS-Grade Calmodulin Resin	Reactive or incompatible with the following materials: oxidising materials
Calmodulin Binding Buffer	May react or be incompatible with oxidising materials.
Calmodulin Elution Buffer	May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products

β-Mercaptoethanol	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Adenoviral pCTAP Shuttle Vector - A	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Adenoviral pCTAP Shuttle Vector - B	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
pCTAP Shuttle vector-C	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Adenoviral pTAP Shuttle-CAT Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
pShuttle-CMV-lacZ Control Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
AD-293 Cell Line >1 x 10e6 Viable Cells	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
BJ5183-AD-1 electroporation competent cells	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Transformation Control	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
XL10-Gold Ultracompetent cells	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
XL10-Gold	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
2-Mercaptoethanol	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
pUC 18 DNA Control Plasmid	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Lysis Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
0.5 M EDTA	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Streptavidin Resin	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Streptavidin Binding Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Streptavidin Elution Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Streptavidin Supernatant Supplement	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
MS-Grade Calmodulin Resin	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Calmodulin Binding Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Calmodulin Elution Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
β-Mercaptoethanol 2-Mercaptoethanol	LD50 Oral	Rat	244 mg/kg	-
XL10-Gold 2-Mercaptoethanol				
Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
2-Mercaptoethanol	LD50 Oral	Rat	244 mg/kg	-
Lysis Buffer Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-
Streptavidin Binding Buffer Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-
Streptavidin Elution Buffer Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-
Streptavidin Supernatant Supplement calcium chloride Imidazole	LD50 Oral LD50 Oral	Rat Rat	1 g/kg 220 mg/kg	- -
MS-Grade Calmodulin Resin Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
Calmodulin Binding Buffer Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-
Calmodulin Elution Buffer Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	1800 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
β-Mercaptoethanol 2-Mercaptoethanol	244	200	N/A	3	N/A
XL10-Gold Ultracompetent cells XL10-Gold Ultracompetent cells	31250	N/A	N/A	N/A	N/A
XL10-Gold 2-Mercaptoethanol XL10-Gold 2-Mercaptoethanol	5545.5	4545.5	N/A	60.7	N/A
Sodium chloride	3000	N/A	N/A	N/A	N/A
2-Mercaptoethanol	244	200	N/A	3	N/A
Lysis Buffer Polyoxyethylene octyl phenyl ether	1800	N/A	N/A	N/A	N/A

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Streptavidin Binding Buffer Polyoxyethylene octyl phenyl ether	1800	N/A	N/A	N/A	N/A
Streptavidin Elution Buffer Polyoxyethylene octyl phenyl ether	1800	N/A	N/A	N/A	N/A
Streptavidin Supernatant Supplement Imidazole	500	N/A	N/A	N/A	N/A
MS-Grade Calmodulin Resin Sodium chloride	3000	N/A	N/A	N/A	N/A
Calmodulin Binding Buffer Polyoxyethylene octyl phenyl ether	1800	N/A	N/A	N/A	N/A
Calmodulin Elution Buffer Polyoxyethylene octyl phenyl ether	1800	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
β-Mercaptoethanol 2-Mercaptoethanol	Eyes - Severe irritant	Rabbit	-	2 mg	-
XL10-Gold 2-Mercaptoethanol Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
2-Mercaptoethanol	Eyes - Severe irritant	Rabbit	-	2 mg	-
Lysis Buffer Polyoxyethylene octyl phenyl ether	Skin - Mild irritant	Rabbit	-	24 hours 500 UI	-
Streptavidin Binding Buffer Polyoxyethylene octyl phenyl ether	Skin - Mild irritant	Rabbit	-	24 hours 500 UI	-
Streptavidin Elution Buffer Polyoxyethylene octyl phenyl ether	Skin - Mild irritant	Rabbit	-	24 hours 500 UI	-
MS-Grade Calmodulin Resin Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Calmodulin Binding Buffer Polyoxyethylene octyl phenyl ether	Skin - Mild irritant	Rabbit	-	24 hours 500 UI	-
Calmodulin Elution Buffer Polyoxyethylene octyl phenyl ether	Skin - Mild irritant	Rabbit	-	24 hours 500 UI	-

Skin : 240105-51: Prolonged or repeated contact may dry skin and cause irritation.

Sensitiser

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Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
β-Mercaptoethanol 2-Mercaptoethanol	Category 2	oral	heart, liver
XL10-Gold 2-Mercaptoethanol 2-Mercaptoethanol	Category 2	oral	heart, liver

Aspiration hazard

Not available.

Information on likely routes of exposure

β-Mercaptoethanol	Routes of entry anticipated: Oral, Dermal, Inhalation.
Adenoviral pCTAP Shuttle Vector - A	Not available.
Adenoviral pCTAP Shuttle Vector - B	Not available.
pCTAP Shuttle vector-C	Not available.
Adenoviral pTAP Shuttle-CAT Vector	Not available.
pShuttle-CMV-lacZ Control Vector	Not available.
AD-293 Cell Line >1 x 10e6 Viable Cells	Routes of entry anticipated: Oral, Dermal, Inhalation.
BJ5183-AD-1 electroporation competent cells	Not available.
Transformation Control	Not available.
XL10-Gold Ultracompetent cells	Routes of entry anticipated: Oral, Dermal, Inhalation.
XL10-Gold 2-Mercaptoethanol	Routes of entry anticipated: Oral, Dermal, Inhalation.
pUC 18 DNA Control Plasmid	Not available.
Lysis Buffer	Not available.
0.5 M EDTA	Routes of entry anticipated: Oral, Dermal, Inhalation.
Streptavidin Resin	Routes of entry anticipated: Oral, Dermal, Inhalation.
Streptavidin Binding Buffer	Not available.
Streptavidin Elution Buffer	Not available.
Streptavidin Supernatant Supplement	Routes of entry anticipated: Oral, Dermal, Inhalation.
MS-Grade Calmodulin Resin	Routes of entry anticipated: Oral, Dermal, Inhalation.
Calmodulin Binding Buffer	Not available.

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Calmodulin Elution Buffer Not available.

Potential acute health effects

Inhalation

: β-Mercaptoethanol	Toxic if inhaled.
Adenoviral pCTAP Shuttle Vector - A	No known significant effects or critical hazards.
Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.
pCTAP Shuttle vector-C	No known significant effects or critical hazards.
Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.
pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.
AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.
BJ5183-AD-1 electroporation competent cells	No known significant effects or critical hazards.
Transformation Control	No known significant effects or critical hazards.
XL10-Gold Ultracompetent cells	No known significant effects or critical hazards.
XL10-Gold 2-Mercaptoethanol	No known significant effects or critical hazards.
pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Lysis Buffer	No known significant effects or critical hazards.
0.5 M EDTA	No known significant effects or critical hazards.
Streptavidin Resin	No known significant effects or critical hazards.
Streptavidin Binding Buffer	No known significant effects or critical hazards.
Streptavidin Elution Buffer	No known significant effects or critical hazards.
Streptavidin Supernatant Supplement	No known significant effects or critical hazards.
MS-Grade Calmodulin Resin	No known significant effects or critical hazards.
Calmodulin Binding Buffer	No known significant effects or critical hazards.
Calmodulin Elution Buffer	No known significant effects or critical hazards.

Ingestion

: β-Mercaptoethanol	Toxic if swallowed.
Adenoviral pCTAP Shuttle Vector - A	No known significant effects or critical hazards.
Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.
pCTAP Shuttle vector-C	No known significant effects or critical hazards.
Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.
pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.
AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.
BJ5183-AD-1 electroporation competent cells	No known significant effects or critical hazards.
Transformation Control	No known significant effects or critical hazards.
XL10-Gold Ultracompetent cells	No known significant effects or critical hazards.
XL10-Gold 2-Mercaptoethanol	No known significant effects or critical hazards.
pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Lysis Buffer	No known significant effects or critical hazards.
0.5 M EDTA	No known significant effects or critical hazards.

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	Streptavidin Resin	No known significant effects or critical hazards.
	Streptavidin Binding Buffer	No known significant effects or critical hazards.
	Streptavidin Elution Buffer	No known significant effects or critical hazards.
	Streptavidin Supernatant Supplement	No known significant effects or critical hazards.
	MS-Grade Calmodulin Resin	No known significant effects or critical hazards.
	Calmodulin Binding Buffer	No known significant effects or critical hazards.
	Calmodulin Elution Buffer	No known significant effects or critical hazards.
Skin contact	: β-Mercaptoethanol	Fatal in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
	Adenoviral pCTAP Shuttle Vector - A	No known significant effects or critical hazards.
	Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.
	pCTAP Shuttle vector-C	No known significant effects or critical hazards.
	Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.
	pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.
	BJ5183-AD-1 electroporation competent cells	No known significant effects or critical hazards.
	Transformation Control XL10-Gold	No known significant effects or critical hazards.
	Ultracompetent cells XL10-Gold	May cause an allergic skin reaction.
	2-Mercaptoethanol	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	Lysis Buffer	No known significant effects or critical hazards.
	0.5 M EDTA	No known significant effects or critical hazards.
	Streptavidin Resin	No known significant effects or critical hazards.
	Streptavidin Binding Buffer	No known significant effects or critical hazards.
	Streptavidin Elution Buffer	No known significant effects or critical hazards.
	Streptavidin Supernatant Supplement	No known significant effects or critical hazards.
	MS-Grade Calmodulin Resin	No known significant effects or critical hazards.
	Calmodulin Binding Buffer	No known significant effects or critical hazards.
	Calmodulin Elution Buffer	No known significant effects or critical hazards.
Eye contact	: β-Mercaptoethanol	Causes serious eye damage.
	Adenoviral pCTAP Shuttle Vector - A	No known significant effects or critical hazards.
	Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.
	pCTAP Shuttle vector-C	No known significant effects or critical hazards.
	Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.
	pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.
	BJ5183-AD-1 electroporation	No known significant effects or critical hazards.

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competent cells	
Transformation Control	No known significant effects or critical hazards.
XL10-Gold	No known significant effects or critical hazards.
Ultracompetent cells	
XL10-Gold	Causes serious eye damage.
2-Mercaptoethanol	
pUC 18 DNA Control	No known significant effects or critical hazards.
Plasmid	
Lysis Buffer	No known significant effects or critical hazards.
0.5 M EDTA	Causes serious eye irritation.
Streptavidin Resin	No known significant effects or critical hazards.
Streptavidin Binding	No known significant effects or critical hazards.
Buffer	
Streptavidin Elution	No known significant effects or critical hazards.
Buffer	
Streptavidin Supernatant	No known significant effects or critical hazards.
Supplement	
MS-Grade Calmodulin	No known significant effects or critical hazards.
Resin	
Calmodulin Binding	No known significant effects or critical hazards.
Buffer	
Calmodulin Elution Buffer	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	:	2-Mercaptoethanol	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		Adenoviral pCTAP Shuttle Vector - A	No specific data.
		Adenoviral pCTAP Shuttle Vector - B	No specific data.
		pCTAP Shuttle vector-C	No specific data.
		Adenoviral pTAP Shuttle-CAT Vector	No specific data.
		pShuttle-CMV-lacZ Control Vector	No specific data.
		AD-293 Cell Line >1 x 10e6 Viable Cells	No specific data.
		BJ5183-AD-1 electroporation competent cells	No specific data.
		Transformation Control	No specific data.
		XL10-Gold	No specific data.
		Ultracompetent cells	
		XL10-Gold	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		2-Mercaptoethanol	
		pUC 18 DNA Control	No specific data.
		Plasmid	
		Lysis Buffer	No specific data.
		0.5 M EDTA	No specific data.
		Streptavidin Resin	No specific data.
		Streptavidin Binding Buffer	No specific data.
		Streptavidin Elution Buffer	No specific data.
		Streptavidin Supernatant Supplement	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths

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		skeletal malformations
	MS-Grade Calmodulin Resin	No specific data.
	Calmodulin Binding Buffer	No specific data.
Ingestion	: <input checked="" type="checkbox"/> Calmodulin Elution Buffer	No specific data.
	<input checked="" type="checkbox"/> 2-Mercaptoethanol	Adverse symptoms may include the following: stomach pains reduced foetal weight increase in foetal deaths skeletal malformations
	Adenoviral pCTAP Shuttle Vector - A	No specific data.
	Adenoviral pCTAP Shuttle Vector - B	No specific data.
	pCTAP Shuttle vector-C	No specific data.
	Adenoviral pTAP Shuttle-CAT Vector	No specific data.
	pShuttle-CMV-lacZ	No specific data.
	Control Vector	No specific data.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No specific data.
	BJ5183-AD-1	No specific data.
	electroporation competent cells	No specific data.
	Transformation Control	No specific data.
	XL10-Gold	No specific data.
	Ultracompetent cells	No specific data.
	XL10-Gold	Adverse symptoms may include the following: stomach pains reduced foetal weight increase in foetal deaths skeletal malformations
	2-Mercaptoethanol	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
	Lysis Buffer	No specific data.
	0.5 M EDTA	No specific data.
	Streptavidin Resin	No specific data.
	Streptavidin Binding Buffer	No specific data.
	Streptavidin Elution Buffer	No specific data.
	Streptavidin Supernatant Supplement	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	MS-Grade Calmodulin Resin	No specific data.
	Calmodulin Binding Buffer	No specific data.
	Calmodulin Elution Buffer	No specific data.
Skin contact	: <input checked="" type="checkbox"/> 2-Mercaptoethanol	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced foetal weight increase in foetal deaths skeletal malformations
	Adenoviral pCTAP Shuttle Vector - A	No specific data.
	Adenoviral pCTAP	No specific data.

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Shuttle Vector - B	
pCTAP Shuttle vector-C	No specific data.
Adenoviral pTAP Shuttle-CAT Vector	No specific data.
pShuttle-CMV-lacZ	No specific data.
Control Vector	
AD-293 Cell Line >1 x 10e6 Viable Cells	No specific data.
BJ5183-AD-1 electroporation competent cells	No specific data.
Transformation Control	No specific data.
XL10-Gold	No specific data.
Ultracompetent cells	
XL10-Gold	Adverse symptoms may include the following:
2-Mercaptoethanol	pain or irritation redness blistering may occur reduced foetal weight increase in foetal deaths skeletal malformations
pUC 18 DNA Control Plasmid	No specific data.
Lysis Buffer	No specific data.
0.5 M EDTA	No specific data.
Streptavidin Resin	No specific data.
Streptavidin Binding Buffer	No specific data.
Streptavidin Elution Buffer	No specific data.
Streptavidin Supernatant Supplement	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
MS-Grade Calmodulin Resin	No specific data.
Calmodulin Binding Buffer	No specific data.
Calmodulin Elution Buffer	No specific data.
Eye contact : β-Mercaptoethanol	Adverse symptoms may include the following: pain watering redness
Adenoviral pCTAP Shuttle Vector - A	No specific data.
Adenoviral pCTAP Shuttle Vector - B	No specific data.
pCTAP Shuttle vector-C	No specific data.
Adenoviral pTAP Shuttle-CAT Vector	No specific data.
pShuttle-CMV-lacZ	No specific data.
Control Vector	
AD-293 Cell Line >1 x 10e6 Viable Cells	No specific data.
BJ5183-AD-1 electroporation competent cells	No specific data.
Transformation Control	No specific data.
XL10-Gold	No specific data.
Ultracompetent cells	
XL10-Gold	Adverse symptoms may include the following:

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2-Mercaptoethanol	pain watering redness
pUC 18 DNA Control Plasmid	No specific data.
Lysis Buffer	No specific data.
0.5 M EDTA	Adverse symptoms may include the following: pain or irritation watering redness
Streptavidin Resin	No specific data.
Streptavidin Binding Buffer	No specific data.
Streptavidin Elution Buffer	No specific data.
Streptavidin Supernatant Supplement	No specific data.
MS-Grade Calmodulin Resin	No specific data.
Calmodulin Binding Buffer	No specific data.
Calmodulin Elution Buffer	No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: <input checked="" type="checkbox"/> 2-Mercaptoethanol	May cause damage to organs through prolonged or repeated exposure if swallowed. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
	Adenoviral pCTAP Shuttle Vector - A	No known significant effects or critical hazards.
	Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.
	pCTAP Shuttle vector-C	No known significant effects or critical hazards.
	Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.
	pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.
	BJ5183-AD-1 electroporation competent cells	No known significant effects or critical hazards.
	Transformation Control XL10-Gold	No known significant effects or critical hazards.
	XL10-Gold Ultracompetent cells	No known significant effects or critical hazards.
	XL10-Gold 2-Mercaptoethanol	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.

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SECTION 11: Toxicological information

	Lysis Buffer	No known significant effects or critical hazards.
	0.5 M EDTA	No known significant effects or critical hazards.
	Streptavidin Resin	No known significant effects or critical hazards.
	Streptavidin Binding Buffer	No known significant effects or critical hazards.
	Streptavidin Elution Buffer	No known significant effects or critical hazards.
	Streptavidin Supernatant Supplement	No known significant effects or critical hazards.
	MS-Grade Calmodulin Resin	No known significant effects or critical hazards.
	Calmodulin Binding Buffer	No known significant effects or critical hazards.
	Calmodulin Elution Buffer	No known significant effects or critical hazards.
Carcinogenicity	: β -Mercaptoethanol	No known significant effects or critical hazards.
	Adenoviral pCTAP Shuttle Vector - A	No known significant effects or critical hazards.
	Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.
	pCTAP Shuttle vector-C	No known significant effects or critical hazards.
	Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.
	pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.
	BJ5183-AD-1 electroporation competent cells	No known significant effects or critical hazards.
	Transformation Control XL10-Gold	No known significant effects or critical hazards.
	Ultracompetent cells XL10-Gold	No known significant effects or critical hazards.
	2-Mercaptoethanol	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	Lysis Buffer	No known significant effects or critical hazards.
	0.5 M EDTA	No known significant effects or critical hazards.
	Streptavidin Resin	No known significant effects or critical hazards.
	Streptavidin Binding Buffer	No known significant effects or critical hazards.
Streptavidin Elution Buffer	No known significant effects or critical hazards.	
Streptavidin Supernatant Supplement	No known significant effects or critical hazards.	
MS-Grade Calmodulin Resin	No known significant effects or critical hazards.	
Calmodulin Binding Buffer	No known significant effects or critical hazards.	
Calmodulin Elution Buffer	No known significant effects or critical hazards.	
Mutagenicity	: β -Mercaptoethanol	No known significant effects or critical hazards.
	Adenoviral pCTAP Shuttle Vector - A	No known significant effects or critical hazards.
	Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.
	pCTAP Shuttle vector-C	No known significant effects or critical hazards.
	Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.
	pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.

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SECTION 11: Toxicological information

	BJ5183-AD-1 electroporation competent cells	No known significant effects or critical hazards.
	Transformation Control XL10-Gold Ultracompetent cells	No known significant effects or critical hazards.
	XL10-Gold 2-Mercaptoethanol	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	Lysis Buffer	No known significant effects or critical hazards.
	0.5 M EDTA	No known significant effects or critical hazards.
	Streptavidin Resin	No known significant effects or critical hazards.
	Streptavidin Binding Buffer	No known significant effects or critical hazards.
	Streptavidin Elution Buffer	No known significant effects or critical hazards.
	Streptavidin Supernatant Supplement	No known significant effects or critical hazards.
	MS-Grade Calmodulin Resin	No known significant effects or critical hazards.
	Calmodulin Binding Buffer	No known significant effects or critical hazards.
	Calmodulin Elution Buffer	No known significant effects or critical hazards.
Reproductive toxicity	: 2-Mercaptoethanol	Suspected of damaging fertility.
	Adenoviral pCTAP Shuttle Vector - A	No known significant effects or critical hazards.
	Adenoviral pCTAP Shuttle Vector - B	No known significant effects or critical hazards.
	pCTAP Shuttle vector-C	No known significant effects or critical hazards.
	Adenoviral pTAP Shuttle-CAT Vector	No known significant effects or critical hazards.
	pShuttle-CMV-lacZ Control Vector	No known significant effects or critical hazards.
	AD-293 Cell Line >1 x 10e6 Viable Cells	No known significant effects or critical hazards.
	BJ5183-AD-1 electroporation competent cells	No known significant effects or critical hazards.
	Transformation Control XL10-Gold Ultracompetent cells	No known significant effects or critical hazards.
	XL10-Gold 2-Mercaptoethanol	Suspected of damaging fertility.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
	Lysis Buffer	No known significant effects or critical hazards.
	0.5 M EDTA	No known significant effects or critical hazards.
	Streptavidin Resin	No known significant effects or critical hazards.
	Streptavidin Binding Buffer	No known significant effects or critical hazards.
	Streptavidin Elution Buffer	No known significant effects or critical hazards.
	Streptavidin Supernatant Supplement	May damage the unborn child.
	MS-Grade Calmodulin Resin	No known significant effects or critical hazards.
	Calmodulin Binding Buffer	No known significant effects or critical hazards.
	Calmodulin Elution Buffer	No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
XL10-Gold 2-Mercaptoethanol Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 21 days 8 weeks
Lysis Buffer Polyoxyethylene octyl phenyl ether	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
0.5 M EDTA Edetic acid	Acute EC50 113000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 41000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
Streptavidin Binding Buffer Polyoxyethylene octyl phenyl ether	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Streptavidin Elution Buffer Polyoxyethylene octyl phenyl ether	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Streptavidin Supernatant Supplement calcium chloride	Acute EC50 3130000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 383.6 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 270 mg/l Marine water	Crustaceans - Americamysis bahia	48 hours
	Acute LC50 2110 mg/l Fresh water	Fish - Pimephales promelas	96 hours
MS-Grade Calmodulin Resin Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca -	3 weeks

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SECTION 12: Ecological information

Calmodulin Binding Buffer Polyoxyethylene octyl phenyl ether	Chronic NOEC 6 g/L Fresh water	Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Aquatic plants - Lemna minor	21 days
	Chronic NOEC 100 mg/l Fresh water	Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	8 weeks
Calmodulin Elution Buffer Polyoxyethylene octyl phenyl ether	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Calmodulin Elution Buffer Polyoxyethylene octyl phenyl ether	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
β-Mercaptoethanol 2-Mercaptoethanol	OECD 310 Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test)	69 % - Not readily - 60 days	20 mg/l	-
XL10-Gold 2-Mercaptoethanol 2-Mercaptoethanol	OECD 310 Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test)	69 % - Not readily - 60 days	20 mg/l	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
β-Mercaptoethanol 2-Mercaptoethanol	-	-	Not readily
XL10-Gold 2-Mercaptoethanol 2-Mercaptoethanol	-	-	Not readily
Lysis Buffer Polyoxyethylene octyl phenyl ether	-	-	Readily
0.5 M EDTA Edetic acid	-	-	Not readily
Streptavidin Binding Buffer Polyoxyethylene octyl phenyl ether	-	-	Readily

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SECTION 12: Ecological information

ether			
Streptavidin Elution Buffer Polyoxyethylene octyl phenyl ether	-	-	Readily
Streptavidin Supernatant Supplement calcium chloride	-	-	Readily
Imidazole	-	-	Readily
Calmodulin Binding Buffer Polyoxyethylene octyl phenyl ether	-	-	Readily
Calmodulin Elution Buffer Polyoxyethylene octyl phenyl ether	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
β-Mercaptoethanol 2-Mercaptoethanol	-0.056	-	low
XL10-Gold 2-Mercaptoethanol 2-Mercaptoethanol	-0.056	-	low
Lysis Buffer Polyoxyethylene octyl phenyl ether	4.86	-	high
0.5 M EDTA Edetic acid	-3.86	1.8	low
Streptavidin Binding Buffer Polyoxyethylene octyl phenyl ether	4.86	-	high
Streptavidin Elution Buffer Polyoxyethylene octyl phenyl ether	4.86	-	high
Streptavidin Supernatant Supplement calcium chloride	<3	-	low
Imidazole	-0.02	-	low
Calmodulin Binding Buffer Polyoxyethylene octyl phenyl ether	4.86	-	high
Calmodulin Elution Buffer Polyoxyethylene octyl phenyl ether	4.86	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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SECTION 12: Ecological information

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
2-Mercaptoethanol	N/A	N/A	N/A	Yes	N/A	N/A	N/A

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

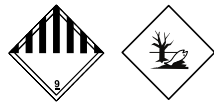
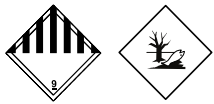

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : Dispose of material(s) and residues under controlled conditions. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN3316	UN3316	UN3316
14.2 UN proper shipping name	CHEMICAL KIT	CHEMICAL KIT	Chemical kit
14.3 Transport hazard class(es)	9 	9 	9 
14.4 Packing group	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

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SECTION 14: Transport information

Remarks: De minimis quantities

Special provisions

ADR: 144

IATA: A58

IMDG: 144

- ADR/RID** : The environmentally hazardous substance mark is not required when transported in sizes of ≤ 5 L or ≤ 5 kg.
Hazard identification number 90
Limited quantity See SP 251
Special provisions 251, 340, 671
Tunnel code (E)
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤ 5 L or ≤ 5 kg.
Emergency schedules F-A, _S-P_
Special provisions 251, 340
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 10 kg. Packaging instructions: 960. Cargo Aircraft Only: 10 kg. Packaging instructions: 960. Limited Quantities - Passenger Aircraft: 1 kg. Packaging instructions: Y960.
Special provisions A44, A163
- 14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

[EU Regulation \(EC\) No. 1907/2006 \(REACH\)](#)

[Annex XIV - List of substances subject to authorisation](#)

[Annex XIV](#)

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
Lysis Buffer Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Listed	42	7/3/2017
Streptavidin Binding Buffer Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Listed	42	7/3/2017
Streptavidin Elution Buffer Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Listed	42	7/3/2017
Calmodulin Binding Buffer Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Listed	42	7/3/2017
Calmodulin Elution Buffer				

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SECTION 15: Regulatory information

Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Listed	42	7/3/2017
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Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
Lysis Buffer Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Candidate	ED/169/2012	12/19/2012
Streptavidin Binding Buffer Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Candidate	ED/169/2012	12/19/2012
Streptavidin Elution Buffer Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Candidate	ED/169/2012	12/19/2012
Calmodulin Binding Buffer Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Candidate	ED/169/2012	12/19/2012
Calmodulin Elution Buffer Polyoxyethylene octyl phenyl ether	Substance of equivalent concern for environment	Candidate	ED/169/2012	12/19/2012

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Ingredient name	EC number	CAS number	Restriction
Streptavidin Supernatant Supplement Streptavidin Supernatant Supplement imidazole	206-019-2	288-32-4	30 30
Calmodulin Binding Buffer imidazole	206-019-2	288-32-4	30
Calmodulin Elution Buffer imidazole	206-019-2	288-32-4	30

Label	: β -Mercaptoethanol	Not applicable.
	Adenoviral pCTAP Shuttle Vector - A	Not applicable.
	Adenoviral pCTAP Shuttle Vector - B	Not applicable.
	pCTAP Shuttle vector-C	Not applicable.
	Adenoviral pTAP Shuttle-CAT Vector	Not applicable.
	pShuttle-CMV-lacZ Control Vector	Not applicable.
	AD-293 Cell Line >1 x 10 ⁶ Viable Cells	Not applicable.
	BJ5183-AD-1 electroporation competent cells	Not applicable.
	Transformation Control	Not applicable.
	XL10-Gold Ultracompetent	Not applicable.

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SECTION 15: Regulatory information

cells	
XL10-Gold	Not applicable.
2-Mercaptoethanol	
pUC 18 DNA Control Plasmid	Not applicable.
Lysis Buffer	Not applicable.
0.5 M EDTA	Not applicable.
Streptavidin Resin	Not applicable.
Streptavidin Binding Buffer	Not applicable.
Streptavidin Elution Buffer	Not applicable.
Streptavidin Supernatant Supplement	Restricted to professional users.
MS-Grade Calmodulin Resin	Not applicable.
Calmodulin Binding Buffer	Not applicable.
Calmodulin Elution Buffer	Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Listed

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
β-Mercaptoethanol H2 E1
Streptavidin Resin P5c
MS-Grade Calmodulin Resin P5c

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : Not determined.
Canada : Not determined.

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SECTION 15: Regulatory information

China	: Not determined.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms	: ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative
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Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
B-Mercaptoethanol Acute Tox. 3, H301 Acute Tox. 2, H310 Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Repr. 2, H361f STOT RE 2, H373 (heart, liver) (oral) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411	On basis of test data On basis of test data On basis of test data Expert judgment Expert judgment Expert judgment Expert judgment Expert judgment Expert judgment Expert judgment Expert judgment
XL10-Gold 2-Mercaptoethanol Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 2, H361f Aquatic Chronic 3, H412	Calculation method Calculation method Calculation method Calculation method
0.5 M EDTA Eye Irrit. 2, H319	Calculation method
Streptavidin Resin Flam. Liq. 3, H226	On basis of test data
Streptavidin Supernatant Supplement Repr. 1B, H360D	Calculation method

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SECTION 16: Other information

MS-Grade Calmodulin Resin

Flam. Liq. 3, H226

On basis of test data

[Full text of abbreviated H statements](#)

2-Mercaptoethanol

H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

XL10-Gold 2-Mercaptoethanol

H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Lysis Buffer

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.

0.5 M EDTA

H319	Causes serious eye irritation.
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Streptavidin Resin

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.

Streptavidin Binding Buffer

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.

Streptavidin Elution Buffer

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.

Streptavidin Supernatant Supplement

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H360D	May damage the unborn child.

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SECTION 16: Other information

MS-Grade Calmodulin Resin

H225
H226
H319

Highly flammable liquid and vapour.
Flammable liquid and vapour.
Causes serious eye irritation.

Calmodulin Binding Buffer

H302
H315
H318
H411

Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.
Toxic to aquatic life with long lasting effects.

Calmodulin Elution Buffer

H302
H315
H318
H411

Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.
Toxic to aquatic life with long lasting effects.

[Full text of classifications \[CLP/GHS\]](#)

Mercaptoethanol

Acute Tox. 2
Acute Tox. 3
Aquatic Acute 1
Aquatic Chronic 2
Eye Dam. 1
Repr. 2
Skin Irrit. 2
Skin Sens. 1A
STOT RE 2

ACUTE TOXICITY - Category 2
ACUTE TOXICITY - Category 3
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
REPRODUCTIVE TOXICITY - Category 2
SKIN CORROSION/IRRITATION - Category 2
SKIN SENSITISATION - Category 1A
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

XL10-Gold 2-Mercaptoethanol

Acute Tox. 2
Acute Tox. 3
Aquatic Acute 1
Aquatic Chronic 2
Aquatic Chronic 3
Eye Dam. 1
Eye Irrit. 2
Repr. 2
Skin Irrit. 2
Skin Sens. 1
Skin Sens. 1A
STOT RE 2

ACUTE TOXICITY - Category 2
ACUTE TOXICITY - Category 3
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
REPRODUCTIVE TOXICITY - Category 2
SKIN CORROSION/IRRITATION - Category 2
SKIN SENSITISATION - Category 1
SKIN SENSITISATION - Category 1A
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

Lysis Buffer

Acute Tox. 4
Aquatic Chronic 2
Eye Dam. 1
Skin Irrit. 2

ACUTE TOXICITY - Category 4
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
SKIN CORROSION/IRRITATION - Category 2

0.5 M EDTA

Eye Irrit. 2

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

Streptavidin Resin

Flam. Liq. 2
Flam. Liq. 3

FLAMMABLE LIQUIDS - Category 2
FLAMMABLE LIQUIDS - Category 3

Streptavidin Binding Buffer

Acute Tox. 4
Aquatic Chronic 2
Eye Dam. 1

ACUTE TOXICITY - Category 4
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1

InterPlay Adenoviral TAP System, Part Number 240215

SECTION 16: Other information

<p>Skin Irrit. 2</p> <p>Streptavidin Elution Buffer Acute Tox. 4 Aquatic Chronic 2 Eye Dam. 1 Skin Irrit. 2</p> <p>Streptavidin Supernatant Supplement Acute Tox. 4 Eye Irrit. 2 Repr. 1B Skin Corr. 1C</p> <p>MS-Grade Calmodulin Resin Eye Irrit. 2 Flam. Liq. 2 Flam. Liq. 3</p> <p>Calmodulin Binding Buffer Acute Tox. 4 Aquatic Chronic 2 Eye Dam. 1 Skin Irrit. 2</p> <p>Calmodulin Elution Buffer Acute Tox. 4 Aquatic Chronic 2 Eye Dam. 1 Skin Irrit. 2</p>	<p>SKIN CORROSION/IRRITATION - Category 2</p> <p>ACUTE TOXICITY - Category 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 2</p> <p>ACUTE TOXICITY - Category 4 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 REPRODUCTIVE TOXICITY - Category 1B SKIN CORROSION/IRRITATION - Category 1C</p> <p>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 FLAMMABLE LIQUIDS - Category 3</p> <p>ACUTE TOXICITY - Category 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 2</p> <p>ACUTE TOXICITY - Category 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 2</p>
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