

# SAFETY DATA SHEET



pCMV-Tag4 Epitope Tagging Mammalian Expression Vectors, Part Number 211174

## Section 1. Identification

### 1.1 Product identifier

**Product name** : pCMV-Tag4 Epitope Tagging Mammalian Expression Vectors, Part Number 211174

**Part no. (chemical kit)** : 211174

**Part no.** :

pCMV-Tag4A Mammalian Expression Vector	211174-51
pCMV-Tag4B Mammalian Expression Vector	211174-52
pCMV-Tag4C Mammalian Expression Vector	211174-53
pCMV-Tag4 Expression Control Plasmid	211174-54
XL1-Blue E. coli Strain	200268-81

**Validation date** : 1/8/2024

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** :

- Analytical reagent.
- pCMV-Tag4A Mammalian Expression Vector 20 µl (20 µg 1 µg/µl)
- pCMV-Tag4B Mammalian Expression Vector 20 µl (20 µg 1 µg/µl)
- pCMV-Tag4C Mammalian Expression Vector 20 µl (20 µg 1 µg/µl)
- pCMV-Tag4 Expression Control Plasmid 20 µl (20 µg 1 µg/µl)
- XL1-Blue E. coli Strain 500 µl

### 1.3 Details of the supplier of the safety data sheet

**Supplier/Manufacturer** : Agilent Technologies, Inc.  
5301 Stevens Creek Blvd  
Santa Clara, CA 95051, USA  
800-227-9770

### 1.4 Emergency telephone number

**In case of emergency** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazards identification

### 2.1 Classification of the substance or mixture

<b>OSHA/HCS status</b>	: pCMV-Tag4A Mammalian Expression Vector	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	pCMV-Tag4B Mammalian Expression Vector	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	pCMV-Tag4C Mammalian Expression Vector	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	pCMV-Tag4 Expression	While this material is not considered hazardous by the

## Section 2. Hazards identification

Control Plasmid	OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
XL1-Blue E. coli Strain	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Classification of the substance or mixture

#### **XL1-Blue E. coli Strain**

H320 EYE IRRITATION - Category 2B

### 2.2 GHS label elements

#### **Signal word**

: pCMV-Tag4A Mammalian Expression Vector	No signal word.
pCMV-Tag4B Mammalian Expression Vector	No signal word.
pCMV-Tag4C Mammalian Expression Vector	No signal word.
pCMV-Tag4 Expression Control Plasmid	No signal word.

#### **Hazard statements**

: XL1-Blue E. coli Strain	Warning
: pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
XL1-Blue E. coli Strain	H320 - Causes eye irritation.

### Precautionary statements

#### **Prevention**

: pCMV-Tag4A Mammalian Expression Vector	Not applicable.
pCMV-Tag4B Mammalian Expression Vector	Not applicable.
pCMV-Tag4C Mammalian Expression Vector	Not applicable.
pCMV-Tag4 Expression Control Plasmid	Not applicable.
XL1-Blue E. coli Strain	Not applicable.

#### **Response**

: pCMV-Tag4A Mammalian Expression Vector	Not applicable.
pCMV-Tag4B Mammalian Expression Vector	Not applicable.
pCMV-Tag4C Mammalian Expression Vector	Not applicable.
pCMV-Tag4 Expression Control Plasmid	Not applicable.
XL1-Blue E. coli Strain	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.

## Section 2. Hazards identification

<b>Storage</b>	:	pCMV-Tag4A Mammalian Expression Vector	Not applicable.
		pCMV-Tag4B Mammalian Expression Vector	Not applicable.
		pCMV-Tag4C Mammalian Expression Vector	Not applicable.
		pCMV-Tag4 Expression Control Plasmid	Not applicable.
		XL1-Blue E. coli Strain	Not applicable.
<b>Disposal</b>	:	pCMV-Tag4A Mammalian Expression Vector	Not applicable.
		pCMV-Tag4B Mammalian Expression Vector	Not applicable.
		pCMV-Tag4C Mammalian Expression Vector	Not applicable.
		pCMV-Tag4 Expression Control Plasmid	Not applicable.
		XL1-Blue E. coli Strain	Not applicable.
<b>Supplemental label elements</b>	:	pCMV-Tag4A Mammalian Expression Vector	None known.
		pCMV-Tag4B Mammalian Expression Vector	None known.
		pCMV-Tag4C Mammalian Expression Vector	None known.
		pCMV-Tag4 Expression Control Plasmid	None known.
		XL1-Blue E. coli Strain	None known.

### 2.3 Other hazards

<b>Hazards not otherwise classified</b>	:	pCMV-Tag4A Mammalian Expression Vector	None known.
		pCMV-Tag4B Mammalian Expression Vector	None known.
		pCMV-Tag4C Mammalian Expression Vector	None known.
		pCMV-Tag4 Expression Control Plasmid	None known.
		XL1-Blue E. coli Strain	None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	:	pCMV-Tag4A Mammalian Expression Vector	Mixture
		pCMV-Tag4B Mammalian Expression Vector	Mixture
		pCMV-Tag4C Mammalian Expression Vector	Mixture
		pCMV-Tag4 Expression Control Plasmid	Mixture
		XL1-Blue E. coli Strain	Mixture

Ingredient name	%	CAS number
<input checked="" type="checkbox"/> XL1-Blue E. coli Strain		
Glycerol	≥10 - ≤25	56-81-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

## Section 3. Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### 4.1 Description of necessary first aid measures

<b>Eye contact</b>	:	pCMV-Tag4A Mammalian Expression 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.
		pCMV-Tag4B Mammalian Expression 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.
		pCMV-Tag4C Mammalian Expression 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.
		pCMV-Tag4 Expression Control Plasmid	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.
		XL1-Blue E. coli Strain	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. If irritation persists, get medical attention.
<b>Inhalation</b>	:	pCMV-Tag4A Mammalian Expression Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		pCMV-Tag4B Mammalian Expression Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		pCMV-Tag4C Mammalian Expression Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		pCMV-Tag4 Expression Control Plasmid	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		XL1-Blue E. coli Strain	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.
<b>Skin contact</b>	:	pCMV-Tag4A Mammalian Expression Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pCMV-Tag4B Mammalian Expression Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pCMV-Tag4C Mammalian Expression Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

## Section 4. First aid measures

	pCMV-Tag4 Expression Control Plasmid	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	XL1-Blue E. coli Strain	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.
<b>Ingestion</b>	: pCMV-Tag4A Mammalian Expression Vector	Wash out mouth with water. 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.
	pCMV-Tag4B Mammalian Expression Vector	Wash out mouth with water. 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.
	pCMV-Tag4C Mammalian Expression Vector	Wash out mouth with water. 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.
	pCMV-Tag4 Expression Control Plasmid	Wash out mouth with water. 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.
	XL1-Blue E. coli Strain	Wash out mouth with water. Remove dentures if any. 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.

### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	Causes eye irritation.

## Section 4. First aid measures

<b>Inhalation</b>	: pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	No known significant effects or critical hazards.
<b>Skin contact</b>	: pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	No known significant effects or critical hazards.
<b>Ingestion</b>	: pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	No known significant effects or critical hazards.
<b><u>Over-exposure signs/symptoms</u></b>		
<b>Eye contact</b>	: pCMV-Tag4A Mammalian Expression Vector	No specific data.
	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	pCMV-Tag4 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	Adverse symptoms may include the following: irritation watering redness
<b>Inhalation</b>	: pCMV-Tag4A Mammalian Expression Vector	No specific data.
	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	pCMV-Tag4 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	No specific data.
<b>Skin contact</b>	: pCMV-Tag4A Mammalian Expression Vector	No specific data.
	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	pCMV-Tag4 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	No specific data.

## Section 4. First aid measures

<b>Ingestion</b>	:	pCMV-Tag4A Mammalian Expression Vector	No specific data.
		pCMV-Tag4B Mammalian Expression Vector	No specific data.
		pCMV-Tag4C Mammalian Expression Vector	No specific data.
		pCMV-Tag4 Expression Control Plasmid	No specific data.
		XL1-Blue E. coli Strain	No specific data.

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician</b>	:	pCMV-Tag4A Mammalian Expression Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		pCMV-Tag4B Mammalian Expression Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		pCMV-Tag4C Mammalian Expression Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		pCMV-Tag4 Expression Control Plasmid	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		XL1-Blue E. coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	:	pCMV-Tag4A Mammalian Expression Vector	No specific treatment.
		pCMV-Tag4B Mammalian Expression Vector	No specific treatment.
		pCMV-Tag4C Mammalian Expression Vector	No specific treatment.
		pCMV-Tag4 Expression Control Plasmid	No specific treatment.
		XL1-Blue E. coli Strain	No specific treatment.
<b>Protection of first-aiders</b>	:	pCMV-Tag4A Mammalian Expression Vector	No action shall be taken involving any personal risk or without suitable training.
		pCMV-Tag4B Mammalian Expression Vector	No action shall be taken involving any personal risk or without suitable training.
		pCMV-Tag4C Mammalian Expression Vector	No action shall be taken involving any personal risk or without suitable training.
		pCMV-Tag4 Expression Control Plasmid	No action shall be taken involving any personal risk or without suitable training.
		XL1-Blue E. coli Strain	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.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: pCMV-Tag4A Mammalian Expression Vector	Use an extinguishing agent suitable for the surrounding fire.
	pCMV-Tag4B Mammalian Expression Vector	Use an extinguishing agent suitable for the surrounding fire.
	pCMV-Tag4C Mammalian Expression Vector	Use an extinguishing agent suitable for the surrounding fire.
	pCMV-Tag4 Expression Control Plasmid	Use an extinguishing agent suitable for the surrounding fire.
	XL1-Blue E. coli Strain	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: pCMV-Tag4A Mammalian Expression Vector	None known.
	pCMV-Tag4B Mammalian Expression Vector	None known.
	pCMV-Tag4C Mammalian Expression Vector	None known.
	pCMV-Tag4 Expression Control Plasmid	None known.
	XL1-Blue E. coli Strain	None known.

### 5.2 Special hazards arising from the substance or mixture

<b>Specific hazards arising from the chemical</b>	: pCMV-Tag4A Mammalian Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV-Tag4B Mammalian Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV-Tag4C Mammalian Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV-Tag4 Expression Control Plasmid	In a fire or if heated, a pressure increase will occur and the container may burst.
	XL1-Blue E. coli Strain	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	: pCMV-Tag4A Mammalian Expression Vector	No specific data.
	pCMV-Tag4B Mammalian Expression Vector	No specific data.
	pCMV-Tag4C Mammalian Expression Vector	No specific data.
	pCMV-Tag4 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides

### 5.3 Advice for firefighters

<b>Special protective actions for fire-fighters</b>	: pCMV-Tag4A Mammalian Expression 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.
	pCMV-Tag4B Mammalian Expression 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.
	pCMV-Tag4C Mammalian	Promptly isolate the scene by removing all persons



## Section 5. Fire-fighting measures

	Expression Vector	from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	pCMV-Tag4 Expression 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.
	XL1-Blue E. coli Strain	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.
<b>Special protective equipment for fire-fighters</b>	: pCMV-Tag4A Mammalian Expression Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	pCMV-Tag4B Mammalian Expression Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	pCMV-Tag4C Mammalian Expression Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	pCMV-Tag4 Expression 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.
	XL1-Blue E. coli Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: pCMV-Tag4A Mammalian Expression 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 spilled material. Put on appropriate personal protective equipment.
	pCMV-Tag4B Mammalian Expression 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 spilled material. Put on appropriate personal protective equipment.
	pCMV-Tag4C Mammalian Expression 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 spilled material. Put on appropriate personal protective equipment.
	pCMV-Tag4 Expression 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 spilled material. Put on appropriate personal protective equipment.
	XL1-Blue E. coli Strain	No action shall be taken involving any personal

## Section 6. Accidental release measures

risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

If specialized 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". If specialized 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". If specialized 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". If specialized 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".

**For emergency responders :** pCMV-Tag4A Mammalian Expression Vector

pCMV-Tag4B Mammalian Expression Vector

pCMV-Tag4C Mammalian Expression Vector

pCMV-Tag4 Expression Control Plasmid

XL1-Blue E. coli Strain

### 6.2 Environmental precautions

**:** pCMV-Tag4A Mammalian Expression Vector

Avoid dispersal of spilled 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).

pCMV-Tag4B Mammalian Expression Vector

Avoid dispersal of spilled 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).

pCMV-Tag4C Mammalian Expression Vector

Avoid dispersal of spilled 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).

pCMV-Tag4 Expression Control Plasmid

Avoid dispersal of spilled 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).

XL1-Blue E. coli Strain

Avoid dispersal of spilled 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 materials for containment and cleaning up

## Section 6. Accidental release measures

<b>Methods for cleaning up</b>	: pCMV-Tag4A Mammalian Expression 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.
	pCMV-Tag4B Mammalian Expression 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.
	pCMV-Tag4C Mammalian Expression 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.
	pCMV-Tag4 Expression Control Plasmid	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.
	XL1-Blue E. coli Strain	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.

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	: pCMV-Tag4A Mammalian Expression Vector pCMV-Tag4B Mammalian Expression Vector pCMV-Tag4C Mammalian Expression Vector pCMV-Tag4 Expression Control Plasmid XL1-Blue E. coli Strain	Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor 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.
<b>Advice on general occupational hygiene</b>	: pCMV-Tag4A Mammalian Expression Vector          pCMV-Tag4B Mammalian Expression 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. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face

## Section 7. Handling and storage

pCMV-Tag4C Mammalian  
Expression Vector

pCMV-Tag4 Expression Control  
Plasmid

XL1-Blue E. coli Strain

### 7.2 Conditions for safe storage, including any incompatibilities

: pCMV-Tag4A Mammalian  
Expression Vector

pCMV-Tag4B Mammalian  
Expression Vector

pCMV-Tag4C Mammalian  
Expression Vector

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. 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. 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. 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.

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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 7. Handling and storage

pCMV-Tag4 Expression 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

XL1-Blue E. coli Strain

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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

#### Recommendations

pCMV-Tag4A Mammalian Expression Vector	Industrial applications, Professional applications.
pCMV-Tag4B Mammalian Expression Vector	Industrial applications, Professional applications.
pCMV-Tag4C Mammalian Expression Vector	Industrial applications, Professional applications.
pCMV-Tag4 Expression Control Plasmid	Industrial applications, Professional applications.
XL1-Blue E. coli Strain	Industrial applications, Professional applications.

#### Industrial sector specific solutions

pCMV-Tag4A Mammalian Expression Vector	Not available.
pCMV-Tag4B Mammalian Expression Vector	Not available.
pCMV-Tag4C Mammalian Expression Vector	Not available.
pCMV-Tag4 Expression Control Plasmid	Not available.
XL1-Blue E. coli Strain	Not available.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<p><b>XL1-Blue E. coli Strain</b> Glycerol</p>	<p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m<sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p>

## Section 8. Exposure controls/personal protection

**CAL OSHA PEL (United States, 5/2018).**

TWA: 5 mg/m<sup>3</sup> 8 hours. Form: respirable fraction

TWA: 10 mg/m<sup>3</sup> 8 hours. Form: total dust

### Biological exposure indices

No exposure indices known.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- 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.

### Individual protection measures

- 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. 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: safety glasses with side-shields.
- 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.
- 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.
- 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.

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** :
- |  |         |
|--|---------|
| pCMV-Tag4A Mammalian Expression Vector | Liquid. |
| pCMV-Tag4B Mammalian Expression Vector | Liquid. |
| pCMV-Tag4C Mammalian Expression Vector | Liquid. |
| pCMV-Tag4 Expression Control Plasmid   | Liquid. |
| XL1-Blue E. coli Strain                | Liquid. |

## Section 9. Physical and chemical properties and safety characteristics

<b>Color</b>	:	pCMV-Tag4A Mammalian Expression Vector	Not available.
		pCMV-Tag4B Mammalian Expression Vector	Not available.
		pCMV-Tag4C Mammalian Expression Vector	Not available.
		pCMV-Tag4 Expression Control Plasmid	Not available.
		XL1-Blue E. coli Strain	Not available.
<b>Odor</b>	:	pCMV-Tag4A Mammalian Expression Vector	Not available.
		pCMV-Tag4B Mammalian Expression Vector	Not available.
		pCMV-Tag4C Mammalian Expression Vector	Not available.
		pCMV-Tag4 Expression Control Plasmid	Not available.
		XL1-Blue E. coli Strain	Not available.
<b>Odor threshold</b>	:	pCMV-Tag4A Mammalian Expression Vector	Not available.
		pCMV-Tag4B Mammalian Expression Vector	Not available.
		pCMV-Tag4C Mammalian Expression Vector	Not available.
		pCMV-Tag4 Expression Control Plasmid	Not available.
		XL1-Blue E. coli Strain	Not available.
<b>pH</b>	:	pCMV-Tag4A Mammalian Expression Vector	7.5
		pCMV-Tag4B Mammalian Expression Vector	7.5
		pCMV-Tag4C Mammalian Expression Vector	7.5
		pCMV-Tag4 Expression Control Plasmid	7.5
		XL1-Blue E. coli Strain	7.5
<b>Melting point/freezing point</b>	:	pCMV-Tag4A Mammalian Expression Vector	0°C (32°F)
		pCMV-Tag4B Mammalian Expression Vector	0°C (32°F)
		pCMV-Tag4C Mammalian Expression Vector	0°C (32°F)
		pCMV-Tag4 Expression Control Plasmid	0°C (32°F)
		XL1-Blue E. coli Strain	Not available.
<b>Boiling point, initial boiling point, and boiling range</b>	:	pCMV-Tag4A Mammalian Expression Vector	100°C (212°F)
		pCMV-Tag4B Mammalian Expression Vector	100°C (212°F)
		pCMV-Tag4C Mammalian Expression Vector	100°C (212°F)
		pCMV-Tag4 Expression Control Plasmid	100°C (212°F)
		XL1-Blue E. coli Strain	Not available.
<b>Flash point</b>	:		

## Section 9. Physical and chemical properties and safety characteristics

	Ingredient name	Closed cup			Open cup		
		°C	°F	Method	°C	°F	Method
<b>Evaporation rate</b>	XL1-Blue E. coli Strain						
	Glycerol	-	-	-	177	350.6	-
<b>Flammability</b>	pCMV-Tag4A Mammalian Expression Vector			Not available.			
	pCMV-Tag4B Mammalian Expression Vector			Not available.			
	pCMV-Tag4C Mammalian Expression Vector			Not available.			
	pCMV-Tag4 Expression Control Plasmid			Not available.			
	XL1-Blue E. coli Strain			Not available.			
<b>Lower and upper explosion limit/flammability limit</b>	pCMV-Tag4A Mammalian Expression Vector			Not applicable.			
	pCMV-Tag4B Mammalian Expression Vector			Not applicable.			
	pCMV-Tag4C Mammalian Expression Vector			Not applicable.			
	pCMV-Tag4 Expression Control Plasmid			Not applicable.			
	XL1-Blue E. coli Strain			Not applicable.			
<b>Vapor pressure</b>	Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	pCMV-Tag4A Mammalian Expression Vector						
	water	17.5	2.3	-	92.258	12.3	-
	pCMV-Tag4B Mammalian Expression Vector						
	water	17.5	2.3	-	92.258	12.3	-
pCMV-Tag4C Mammalian Expression Vector							
water	17.5	2.3	-	92.258	12.3	-	



## Section 9. Physical and chemical properties and safety characteristics

<b>pCMV-Tag4 Expression Control Plasmid</b>							
water	17.5	2.3	-		92.258	12.3	-
<b>XL1-Blue E. coli Strain</b>							
water	17.5	2.3	-		92.258	12.3	-
Glycerol	0.000075	0.00001	-		0.0025	0.00033	-

**Relative vapor density** : pCMV-Tag4A Mammalian Expression Vector Not available.

pCMV-Tag4B Mammalian Expression Vector Not available.

pCMV-Tag4C Mammalian Expression Vector Not available.

pCMV-Tag4 Expression Control Plasmid Not available.

XL1-Blue E. coli Strain Not available.

**Relative density** : pCMV-Tag4A Mammalian Expression Vector Not available.

pCMV-Tag4B Mammalian Expression Vector Not available.

pCMV-Tag4C Mammalian Expression Vector Not available.

pCMV-Tag4 Expression Control Plasmid Not available.

XL1-Blue E. coli Strain Not available.

<b>Solubility(ies)</b>	<b>Media</b>	<b>Result</b>
	<b>pCMV-Tag4A Mammalian Expression Vector</b>	
	water	Soluble
	<b>pCMV-Tag4B Mammalian Expression Vector</b>	
	water	Soluble
	<b>pCMV-Tag4C Mammalian Expression Vector</b>	
	water	Soluble
	<b>pCMV-Tag4 Expression Control Plasmid</b>	
	water	Soluble
	<b>XL1-Blue E. coli Strain</b>	
	water	Soluble

**Partition coefficient: n-octanol/water** : pCMV-Tag4A Mammalian Expression Vector Not applicable.

pCMV-Tag4B Mammalian Expression Vector Not applicable.

pCMV-Tag4C Mammalian Expression Vector Not applicable.

pCMV-Tag4 Expression Control Plasmid Not applicable.

XL1-Blue E. coli Strain Not applicable.

**Auto-ignition temperature** :

## Section 9. Physical and chemical properties and safety characteristics

	Ingredient name	°C	°F	Method
	XL1-Blue E. coli Strain			
	Glycerol	370	698	-
<b>Decomposition temperature</b>	: pCMV-Tag4A Mammalian Expression Vector	Not available.		
	pCMV-Tag4B Mammalian Expression Vector	Not available.		
	pCMV-Tag4C Mammalian Expression Vector	Not available.		
	pCMV-Tag4 Expression Control Plasmid	Not available.		
	XL1-Blue E. coli Strain	Not available.		
<b>Viscosity</b>	: pCMV-Tag4A Mammalian Expression Vector	Not available.		
	pCMV-Tag4B Mammalian Expression Vector	Not available.		
	pCMV-Tag4C Mammalian Expression Vector	Not available.		
	pCMV-Tag4 Expression Control Plasmid	Not available.		
	XL1-Blue E. coli Strain	Not available.		
<b>Particle characteristics</b>				
<b>Median particle size</b>	: pCMV-Tag4A Mammalian Expression Vector	Not applicable.		
	pCMV-Tag4B Mammalian Expression Vector	Not applicable.		
	pCMV-Tag4C Mammalian Expression Vector	Not applicable.		
	pCMV-Tag4 Expression Control Plasmid	Not applicable.		
	XL1-Blue E. coli Strain	Not applicable.		

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	: pCMV-Tag4A Mammalian Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCMV-Tag4B Mammalian Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCMV-Tag4C Mammalian Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCMV-Tag4 Expression Control Plasmid	No specific test data related to reactivity available for this product or its ingredients.
	XL1-Blue E. coli Strain	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: pCMV-Tag4A Mammalian Expression Vector	The product is stable.
	pCMV-Tag4B Mammalian Expression Vector	The product is stable.
	pCMV-Tag4C Mammalian Expression Vector	The product is stable.
	pCMV-Tag4 Expression Control Plasmid	The product is stable.
	XL1-Blue E. coli Strain	The product is stable.

## Section 10. Stability and reactivity

<b>10.3 Possibility of hazardous reactions</b>	: pCMV-Tag4A Mammalian Expression Vector pCMV-Tag4B Mammalian Expression Vector pCMV-Tag4C Mammalian Expression Vector pCMV-Tag4 Expression Control Plasmid XL1-Blue E. coli Strain	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: pCMV-Tag4A Mammalian Expression Vector pCMV-Tag4B Mammalian Expression Vector pCMV-Tag4C Mammalian Expression Vector pCMV-Tag4 Expression Control Plasmid XL1-Blue E. coli Strain	No specific data. No specific data. No specific data. No specific data. No specific data.
<b>10.5 Incompatible materials</b>	: pCMV-Tag4A Mammalian Expression Vector pCMV-Tag4B Mammalian Expression Vector pCMV-Tag4C Mammalian Expression Vector pCMV-Tag4 Expression Control Plasmid XL1-Blue E. coli Strain	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
<b>10.6 Hazardous decomposition products</b>	: pCMV-Tag4A Mammalian Expression Vector  pCMV-Tag4B Mammalian Expression Vector  pCMV-Tag4C Mammalian Expression Vector  pCMV-Tag4 Expression Control Plasmid  XL1-Blue E. coli Strain	Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
XL1-Blue E. coli Strain Glycerol	LD50 Oral	Rat	12600 mg/kg	-

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
XL1-Blue E. coli Strain Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

### Sensitization

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)

Not available.

### Aspiration hazard

Not available.

<b>Information on the likely routes of exposure</b>	: pCMV-Tag4A Mammalian Expression Vector	Not available.
	pCMV-Tag4B Mammalian Expression Vector	Not available.
	pCMV-Tag4C Mammalian Expression Vector	Not available.
	pCMV-Tag4 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

<b>Eye contact</b>	: pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	Causes eye irritation.
<b>Inhalation</b>	: pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	No known significant effects or critical hazards.

## Section 11. Toxicological information

<b>Skin contact</b>	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.
<b>Ingestion</b>	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	:	pCMV-Tag4A Mammalian Expression Vector	No specific data.
		pCMV-Tag4B Mammalian Expression Vector	No specific data.
		pCMV-Tag4C Mammalian Expression Vector	No specific data.
		pCMV-Tag4 Expression Control Plasmid	No specific data.
		XL1-Blue E. coli Strain	Adverse symptoms may include the following: irritation watering redness
<b>Inhalation</b>	:	pCMV-Tag4A Mammalian Expression Vector	No specific data.
		pCMV-Tag4B Mammalian Expression Vector	No specific data.
		pCMV-Tag4C Mammalian Expression Vector	No specific data.
		pCMV-Tag4 Expression Control Plasmid	No specific data.
		XL1-Blue E. coli Strain	No specific data.
<b>Skin contact</b>	:	pCMV-Tag4A Mammalian Expression Vector	No specific data.
		pCMV-Tag4B Mammalian Expression Vector	No specific data.
		pCMV-Tag4C Mammalian Expression Vector	No specific data.
		pCMV-Tag4 Expression Control Plasmid	No specific data.
		XL1-Blue E. coli Strain	No specific data.
<b>Ingestion</b>	:	pCMV-Tag4A Mammalian Expression Vector	No specific data.
		pCMV-Tag4B Mammalian Expression Vector	No specific data.
		pCMV-Tag4C Mammalian Expression Vector	No specific data.
		pCMV-Tag4 Expression Control Plasmid	No specific data.
		XL1-Blue E. coli Strain	No specific data.

## Section 11. Toxicological information

### Delayed and immediate effects and also 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

<b>General</b>	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.
<b>Mutagenicity</b>	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	:	pCMV-Tag4A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag4 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
<b>XL1-Blue E. coli Strain</b> XL1-Blue E. coli Strain Glycerol	300000.0 12600	N/A N/A	N/A N/A	N/A N/A	N/A N/A

## Section 12. Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>XL1-Blue E. coli Strain</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>XL1-Blue E. coli Strain</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>XL1-Blue E. coli Strain</b> Glycerol	-1.76	-	Low

### 12.4 Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

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

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

**Disposal methods** : The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 13. Disposal considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## Section 14. Transport information

**DOT / TDG / Mexico / IMDG / IATA** : Not regulated.

**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.

**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

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**Clean Water Act (CWA) 311:** Edetic acid

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

<b>Classification</b>	:	pCMV-Tag4A Mammalian Expression Vector	Not applicable.
		pCMV-Tag4B Mammalian Expression Vector	Not applicable.
		pCMV-Tag4C Mammalian Expression Vector	Not applicable.
		pCMV-Tag4 Expression Control Plasmid	Not applicable.
		XL1-Blue E. coli Strain	EYE IRRITATION - Category 2B

#### Composition/information on ingredients



## Section 15. Regulatory information

Name	%	Classification
<input checked="" type="checkbox"/> XL1-Blue E. coli Strain Glycerol	≥10 - ≤25	EYE IRRITATION - Category 2B

### State regulations

- Massachusetts** : The following components are listed: GLYCERINE MIST
- New York** : None of the components are listed.
- New Jersey** :  The following components are listed: GLYCERIN
- Pennsylvania** : The following components are listed: 1,2,3-PROPANETRIOL

### California Prop. 65

**⚠ WARNING:** This product can expose you to Tetracycline, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
XL1-Blue E. coli Strain Tetracycline	-	-

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

## Section 16. Other information

### [Procedure used to derive the classification](#)

Classification	Justification
<input checked="" type="checkbox"/> <b>L1-Blue E. coli Strain</b> EYE IRRITATION - Category 2B	Calculation method

### [History](#)

**Date of issue/Date of revision** : 01/08/2024

**Date of previous issue** : 11/10/2020

**Version** : 7

### [Key to abbreviations](#)

: ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 N/A = Not available  
 UN = United Nations

Indicates information that has changed from previously issued version.

### [Notice to reader](#)

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