

# SAFETY DATA SHEET



ViraPack Transfection Kit, Part Number 200488

## Section 1. Identification

**Product identifier** : ViraPack Transfection Kit, Part Number 200488  
**Part No. (Chemical Kit)** : 200488  
**Part No.** : ViraPack Transfection Kit Solution 1 200488-51  
 ViraPack Transfection Kit Solution 2 200488-52  
 Virapack Transfection Kit Solution 3 200488-53  
 pCMV β-Gal Control Plasmid 200388-54

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

Analytical reagent.

ViraPack Transfection Kit Solution 1	5 ml	
ViraPack Transfection Kit Solution 2	25 ml	
Virapack Transfection Kit Solution 3	40 ml	
pCMV β-Gal Control Plasmid	0.04 ml (40 µg	1 µg/µl)

**Supplier/Manufacturer** : Agilent Technologies Australia Pty Ltd  
 679 Springvale Road  
 Mulgrave  
 Victoria 3170, Australia  
 1800 802 402

**Emergency telephone number (with hours of operation)** : CHEMTREC®: (61)-290372994

## Section 2. Hazard(s) identification

### Classification of the substance or mixture

ViraPack Transfection Kit  
 Solution 1  
 H319

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

ViraPack Transfection Kit Solution 1	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 37%
ViraPack Transfection Kit Solution 2	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 1.1%
Virapack Transfection Kit Solution 3	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 98.8%
ViraPack Transfection Kit Solution 2	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.1%
Virapack Transfection Kit Solution 3	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 98.8%

### GHS label elements

Hazard pictograms



## Section 2. Hazard(s) identification

<b>Signal word</b>	: <input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	WARNING
	ViraPack Transfection Kit Solution 2	No signal word.
	Virapack Transfection Kit Solution 3	No signal word.
	pCMV $\beta$ -Gal Control Plasmid	No signal word.
<b>Hazard statements</b>	: <input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	H319 - Causes serious eye irritation.
	ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
	Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
	pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b><u>Precautionary statements</u></b>		
<b>Prevention</b>	: <input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	P280 - Wear eye or face protection.
	ViraPack Transfection Kit Solution 2	P264 - Wash hands thoroughly after handling. Not applicable.
	Virapack Transfection Kit Solution 3	Not applicable.
	pCMV $\beta$ -Gal Control Plasmid	Not applicable.
<b>Response</b>	: <input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	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 attention.
	ViraPack Transfection Kit Solution 2	Not applicable.
	Virapack Transfection Kit Solution 3	Not applicable.
	pCMV $\beta$ -Gal Control Plasmid	Not applicable.
<b>Storage</b>	: <input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	Not applicable.
	ViraPack Transfection Kit Solution 2	Not applicable.
	Virapack Transfection Kit Solution 3	Not applicable.
	pCMV $\beta$ -Gal Control Plasmid	Not applicable.
<b>Disposal</b>	: <input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	Not applicable.
	ViraPack Transfection Kit Solution 2	Not applicable.
	Virapack Transfection Kit Solution 3	Not applicable.
	pCMV $\beta$ -Gal Control Plasmid	Not applicable.
<b>Supplemental label elements</b>	: <input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	Not applicable.
	ViraPack Transfection Kit Solution 2	Not applicable.
	Virapack Transfection Kit Solution 3	Not applicable.
	pCMV $\beta$ -Gal Control Plasmid	Not applicable.

## Section 2. Hazard(s) identification

<b>Other hazards which do not result in classification</b>	<input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	None known.
	<input type="checkbox"/> ViraPack Transfection Kit Solution 2	None known.
	<input type="checkbox"/> Virapack Transfection Kit Solution 3	None known.
	<input type="checkbox"/> pCMV $\beta$ -Gal Control Plasmid	None known.

## Section 3. Composition and ingredient information

<b>Substance/mixture</b>	<input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	Mixture
	<input type="checkbox"/> ViraPack Transfection Kit Solution 2	Mixture
	<input type="checkbox"/> Virapack Transfection Kit Solution 3	Mixture
	<input type="checkbox"/> pCMV $\beta$ -Gal Control Plasmid	Mixture

### CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
<input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1 Calcium chloride (CaCl <sub>2</sub> ), dihydrate	$\geq 30 - \leq 60$	10035-04-8
<input type="checkbox"/> Virapack Transfection Kit Solution 3 Ethanol	$\leq 3$	64-17-5

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.



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

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	<input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	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.
	<input type="checkbox"/> ViraPack Transfection Kit Solution 2	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.
	<input type="checkbox"/> Virapack Transfection Kit Solution 3	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.
	<input type="checkbox"/> pCMV $\beta$ -Gal 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.
<b>Inhalation</b>	<input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	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.

## Section 4. First aid measures

	ViraPack Transfection Kit Solution 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. 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.
	Virapack Transfection Kit Solution 3	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pCMV $\beta$ -Gal Control Plasmid	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	:  ViraPack Transfection Kit Solution 1	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.
	ViraPack Transfection Kit Solution 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Virapack Transfection Kit Solution 3	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pCMV $\beta$ -Gal Control Plasmid	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	:  ViraPack Transfection Kit Solution 1	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.
	ViraPack Transfection Kit Solution 2	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.
	Virapack Transfection Kit Solution 3	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.
	pCMV $\beta$ -Gal 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 induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

## Section 4. First aid measures

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

#### Potential acute health effects

<b>Eye contact</b>	:	✓ ViraPack Transfection Kit Solution 1	Causes serious eye irritation.
		ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
		Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
		pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Inhalation</b>	:	✓ ViraPack Transfection Kit Solution 1	No known significant effects or critical hazards.
		ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
		Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
		pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Skin contact</b>	:	✓ ViraPack Transfection Kit Solution 1	No known significant effects or critical hazards.
		ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
		Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
		pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Ingestion</b>	:	✓ ViraPack Transfection Kit Solution 1	No known significant effects or critical hazards.
		ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
		Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
		pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	:	✓ ViraPack Transfection Kit Solution 1	Adverse symptoms may include the following: pain or irritation watering redness
		ViraPack Transfection Kit Solution 2	No specific data.
		Virapack Transfection Kit Solution 3	No specific data.
		pCMV $\beta$ -Gal Control Plasmid	No specific data.
<b>Inhalation</b>	:	✓ ViraPack Transfection Kit Solution 1	No specific data.
		ViraPack Transfection Kit Solution 2	No specific data.
		Virapack Transfection Kit Solution 3	No specific data.
		pCMV $\beta$ -Gal Control Plasmid	No specific data.
<b>Skin contact</b>	:	✓ ViraPack Transfection Kit Solution 1	No specific data.
		ViraPack Transfection Kit Solution 2	No specific data.
		Virapack Transfection Kit Solution 3	No specific data.
		pCMV $\beta$ -Gal Control Plasmid	No specific data.

## Section 4. First aid measures

<b>Ingestion</b>	: ✓ ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β-Gal Control Plasmid	No specific data. No specific data. No specific data. No specific data.
 <b>Indication of immediate medical attention and special treatment needed, if necessary</b>		
<b>Notes to physician</b>	: ✓ ViraPack Transfection Kit Solution 1  ViraPack Transfection Kit Solution 2  Virapack Transfection Kit Solution 3  pCMV β-Gal Control Plasmid	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: ✓ ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β-Gal Control Plasmid	No specific treatment. No specific treatment. No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: ✓ ViraPack Transfection Kit Solution 1  ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β-Gal Control Plasmid	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. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	: ✓ ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β-Gal Control Plasmid	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: ✓ ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β-Gal Control Plasmid	None known. None known. None known. None known.

## Section 5. Firefighting measures


<b>Specific hazards arising from the chemical</b>	: ViraPack Transfection Kit Solution 1	In a fire or if heated, a pressure increase will occur and the container may burst.
	ViraPack Transfection Kit Solution 2	In a fire or if heated, a pressure increase will occur and the container may burst.
	Virapack Transfection Kit Solution 3	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV $\beta$ -Gal Control Plasmid	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	: ViraPack Transfection Kit Solution 1	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
	ViraPack Transfection Kit Solution 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides
	Virapack Transfection Kit Solution 3	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	pCMV $\beta$ -Gal Control Plasmid	No specific data.
<b>Special protective actions for fire-fighters</b>	: ViraPack Transfection Kit Solution 1	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.
	ViraPack Transfection Kit Solution 2	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.
	Virapack Transfection Kit Solution 3	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 $\beta$ -Gal 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.
<b>Special protective equipment for fire-fighters</b>	: ViraPack Transfection Kit Solution 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	ViraPack Transfection Kit Solution 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Virapack Transfection Kit Solution 3	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	pCMV $\beta$ -Gal 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.



## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

:  ViraPack Transfection Kit Solution 1

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.

ViraPack Transfection Kit Solution 2

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.


Virapack Transfection Kit Solution 3

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.

pCMV  $\beta$ -Gal 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.

#### For emergency responders

:  ViraPack Transfection Kit Solution 1

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".

ViraPack Transfection Kit Solution 2

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".


Virapack Transfection Kit Solution 3

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".

pCMV  $\beta$ -Gal Control Plasmid

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".

#### Environmental precautions

:  ViraPack Transfection Kit Solution 1

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).

ViraPack Transfection Kit Solution 2

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).

Virapack Transfection Kit Solution 3

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).

pCMV  $\beta$ -Gal 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



## Section 6. Accidental release measures



caused environmental pollution (sewers, waterways, soil or air).

### Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	:  ViraPack Transfection Kit Solution 1	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.
	ViraPack Transfection Kit Solution 2	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.
	Virapack Transfection Kit Solution 3	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 $\beta$ -Gal 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.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	:  ViraPack Transfection Kit Solution 1	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.
	ViraPack Transfection Kit Solution 2	Put on appropriate personal protective equipment (see Section 8).
	Virapack Transfection Kit Solution 3	Put on appropriate personal protective equipment (see Section 8).
	pCMV $\beta$ -Gal Control Plasmid	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	:  ViraPack Transfection Kit Solution 1	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.
	ViraPack Transfection Kit Solution 2	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.
	Virapack Transfection Kit Solution 3	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and

## Section 7. Handling and storage

		<p>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.</p>
	pCMV $\beta$ -Gal Control Plasmid	<p>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.</p>
<p><b>Conditions for safe storage, including any incompatibilities</b></p>	<p>: ViraPack Transfection Kit Solution 1</p>	<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.</p>
	ViraPack Transfection Kit Solution 2	<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.</p>
	Virapack Transfection Kit Solution 3	<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.</p>
	pCMV $\beta$ -Gal Control Plasmid	<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.</p>

## Section 8. Exposure controls and personal protection

### Control parameters

### Occupational exposure limits

## Section 8. Exposure controls and personal protection

Ingredient name	Exposure limits
<b>Virapack Transfection Kit Solution 3</b> Ethanol	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 1880 mg/m <sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours.

- 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** : 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: chemical splash goggles.
- 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.
- 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

### Appearance

- Physical state** :
- |                                      |         |
|--------------------------------------|---------|
| Virapack Transfection Kit Solution 1 | Liquid. |
| Virapack Transfection Kit Solution 2 | Liquid. |
| Virapack Transfection Kit Solution 3 | Liquid. |
| pCMV β-Gal Control Plasmid           | Liquid. |

## Section 9. Physical and chemical properties

<b>Colour</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.
<b>Odour</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.
<b>Odour threshold</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.
<b>pH</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	6.95
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.
<b>Melting point</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	0°C (32°F)
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	0°C (32°F)
<b>Boiling point</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	100°C (212°F)
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	100°C (212°F)
<b>Flash point</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.
<b>Evaporation rate</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.

## Section 9. Physical and chemical properties

<b>Flammability (solid, gas)</b>	: ✓ ViraPack Transfection Kit Solution 1	Not applicable.
	ViraPack Transfection Kit Solution 2	Not applicable.
	Virapack Transfection Kit Solution 3	Not applicable.
	pCMV $\beta$ -Gal Control Plasmid	Not applicable.
<b>Lower and upper explosive (flammable) limits</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.
<b>Vapour pressure</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.
<b>Vapour density</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.
<b>Relative density</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.
<b>Solubility</b>	: ✓ ViraPack Transfection Kit Solution 1	Soluble in the following materials: cold water and hot water.
	ViraPack Transfection Kit Solution 2	Easily soluble in the following materials: cold water and hot water.
	Virapack Transfection Kit Solution 3	Easily soluble in the following materials: cold water and hot water.
	pCMV $\beta$ -Gal Control Plasmid	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.
<b>Auto-ignition temperature</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV $\beta$ -Gal Control Plasmid	Not available.

## Section 9. Physical and chemical properties

<b>Decomposition temperature</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV β-Gal Control Plasmid	Not available.
<b>Viscosity</b>	: ✓ ViraPack Transfection Kit Solution 1	Not available.
	ViraPack Transfection Kit Solution 2	Not available.
	Virapack Transfection Kit Solution 3	Not available.
	pCMV β-Gal Control Plasmid	Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: ✓ ViraPack Transfection Kit Solution 1	No specific test data related to reactivity available for this product or its ingredients.
	ViraPack Transfection Kit Solution 2	No specific test data related to reactivity available for this product or its ingredients.
	Virapack Transfection Kit Solution 3	No specific test data related to reactivity available for this product or its ingredients.
	pCMV β-Gal Control Plasmid	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: ✓ ViraPack Transfection Kit Solution 1	The product is stable.
	ViraPack Transfection Kit Solution 2	The product is stable.
	Virapack Transfection Kit Solution 3	The product is stable.
	pCMV β-Gal Control Plasmid	The product is stable.
<b>Possibility of hazardous reactions</b>	: ✓ ViraPack Transfection Kit Solution 1	Under normal conditions of storage and use, hazardous reactions will not occur.
	ViraPack Transfection Kit Solution 2	Under normal conditions of storage and use, hazardous reactions will not occur.
	Virapack Transfection Kit Solution 3	Under normal conditions of storage and use, hazardous reactions will not occur.
	pCMV β-Gal Control Plasmid	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: ✓ ViraPack Transfection Kit Solution 1	No specific data.
	ViraPack Transfection Kit Solution 2	No specific data.
	Virapack Transfection Kit Solution 3	No specific data.
	pCMV β-Gal Control Plasmid	No specific data.
<b>Incompatible materials</b>	: ✓ ViraPack Transfection Kit Solution 1	May react or be incompatible with oxidising materials.
	ViraPack Transfection Kit Solution 2	May react or be incompatible with oxidising materials.
	Virapack Transfection Kit Solution 3	May react or be incompatible with oxidising materials.
	pCMV β-Gal Control Plasmid	May react or be incompatible with oxidising materials.



## Section 10. Stability and reactivity

<b>Hazardous decomposition products</b>	: <input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	ViraPack Transfection Kit Solution 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Virapack Transfection Kit Solution 3	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pCMV $\beta$ -Gal Control Plasmid	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<input checked="" type="checkbox"/> Virapack Transfection Kit Solution 3 Ethanol	LC50 Inhalation Vapour LD50 Oral	Rat Rat	124700 mg/m <sup>3</sup> 7 g/kg	4 hours -

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<input checked="" type="checkbox"/> Virapack Transfection Kit Solution 3 Ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

#### Sensitisation

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

## Section 11. Toxicological information

Not available.

<b>Information on likely routes of exposure</b>	<b>:</b> ViraPack Transfection Kit Solution 1	Routes of entry anticipated: Oral, Dermal, Inhalation.
	ViraPack Transfection Kit Solution 2	Routes of entry anticipated: Oral, Dermal, Inhalation.
	Virapack Transfection Kit Solution 3	Routes of entry anticipated: Oral, Dermal, Inhalation.
	pCMV $\beta$ -Gal Control Plasmid	Not available.

### Potential acute health effects

<b>Eye contact</b>	<b>:</b> ViraPack Transfection Kit Solution 1	Causes serious eye irritation.
	ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
	Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
	pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Inhalation</b>	<b>:</b> ViraPack Transfection Kit Solution 1	No known significant effects or critical hazards.
	ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
	Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
	pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Skin contact</b>	<b>:</b> ViraPack Transfection Kit Solution 1	No known significant effects or critical hazards.
	ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
	Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
	pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Ingestion</b>	<b>:</b> ViraPack Transfection Kit Solution 1	No known significant effects or critical hazards.
	ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
	Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
	pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.

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

<b>Eye contact</b>	<b>:</b> ViraPack Transfection Kit Solution 1	Adverse symptoms may include the following: pain or irritation watering redness
	ViraPack Transfection Kit Solution 2	No specific data.
	Virapack Transfection Kit Solution 3	No specific data.
	pCMV $\beta$ -Gal Control Plasmid	No specific data.
<b>Inhalation</b>	<b>:</b> ViraPack Transfection Kit Solution 1	No specific data.
	ViraPack Transfection Kit Solution 2	No specific data.
	Virapack Transfection Kit Solution 3	No specific data.
	pCMV $\beta$ -Gal Control Plasmid	No specific data.

## Section 11. Toxicological information

<b>Skin contact</b>	: ✓ ViraPack Transfection Kit Solution 1	No specific data.
	ViraPack Transfection Kit Solution 2	No specific data.
	Virapack Transfection Kit Solution 3	No specific data.
	pCMV $\beta$ -Gal Control Plasmid	No specific data.
<b>Ingestion</b>	: ✓ ViraPack Transfection Kit Solution 1	No specific data.
	ViraPack Transfection Kit Solution 2	No specific data.
	Virapack Transfection Kit Solution 3	No specific data.
	pCMV $\beta$ -Gal Control Plasmid	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

Not available.

<b>General</b>	: ✓ ViraPack Transfection Kit Solution 1	No known significant effects or critical hazards.
	ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
	Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
	pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: ✓ ViraPack Transfection Kit Solution 1	No known significant effects or critical hazards.
	ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
	Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
	pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: ✓ ViraPack Transfection Kit Solution 1	No known significant effects or critical hazards.
	ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
	Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
	pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Teratogenicity</b>	: ✓ ViraPack Transfection Kit Solution 1	No known significant effects or critical hazards.
	ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
	Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
	pCMV $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.

## Section 11. Toxicological information

<b>Developmental effects</b>	: ✓ ViraPack Transfection Kit Solution 1	No known significant effects or critical hazards.
	ViraPack Transfection Kit Solution 2	No known significant effects or critical hazards.
	Virapack Transfection Kit Solution 3	No known significant effects or critical hazards.
	pCMV β-Gal Control Plasmid	No known significant effects or critical hazards.
	<b>Fertility effects</b>	: ✓ ViraPack Transfection Kit Solution 1
ViraPack Transfection Kit Solution 2		No known significant effects or critical hazards.
Virapack Transfection Kit Solution 3		No known significant effects or critical hazards.
pCMV β-Gal Control Plasmid		No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
✓ ViraPack Transfection Kit Solution 1 Calcium chloride (CaCl <sub>2</sub> ), dihydrate	Acute EC50 2900 mg/l Fresh water	Algae	72 hours
	Acute NOEC 2000 mg/l Fresh water	Daphnia	48 hours
Virapack Transfection Kit Solution 3 Ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 100 µl/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Chronic NOEC 0.375 µl/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks	

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
✓ Virapack Transfection Kit Solution 3 Ethanol	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
✓ Virapack Transfection Kit Solution 3 Ethanol	-0.35	0.5	low

## Section 12. Ecological information

### Mobility in soil

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

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

## Section 13. Disposal considerations

**Disposal methods** :  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. 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. 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

### Regulatory information

**ADG / IMDG / IATA** : Not regulated as Dangerous Goods according to the ADG Code .

**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 Annex II of Marpol and the IBC Code** : Not available.

## Section 15. Regulatory information

### Standard Uniform Schedule of Medicine and Poisons

Not regulated.

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

**Australia inventory (AICS)** : Not determined.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

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.

### International lists

## Section 15. Regulatory information

### National inventory

Canada	: Not determined.
China	: Not determined.
Europe	: Not determined.
Japan	: <input checked="" type="checkbox"/> <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
Malaysia	: Not determined.
New Zealand	: <input checked="" type="checkbox"/> All components are listed or exempted.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: <input checked="" type="checkbox"/> All components are listed or exempted.
Turkey	: <input checked="" type="checkbox"/> Not determined.
United States	: Not determined.

## Section 16. Any other relevant information

### History

Date of issue/Date of revision	: 30/03/2017
Date of previous issue	: 24/12/2014.
Version	: 5

### Key to abbreviations

: ADG = Australian Dangerous Goods  
 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)  
 NOHSC = National Occupational Health and Safety Commission  
 SUSMP = Standard Uniform Schedule of Medicine and Poisons  
 UN = United Nations

### Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1 Eye Irrit. 2A, H319	Calculation method

**References** : Not available.

Indicates information that has changed from previously issued version.

### Notice to reader

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