

SAFETY DATA SHEET

pCMV-Tag5 Epitope Tagging Mammalian Expression Vectors, Part Number 211175

Section 1. Identification

Product identifier	: pCMV-Tag5 Epitope Tagging Mammalian Expression Vectors, Part Number 211175
Part no. (chemical kit)	: 211175
Part no.	: pCMV-Tag5A Mammalian Expression Vector 211175-51 pCMV-Tag5B Mammalian Expression Vector 211175-52 pCMV-Tag5C Mammalian Expression Vector 211175-53 pCMV-Tag5 Expression Control Plasmid 211175-54 XL1-Blue E. coli Strain 200268-81
Material uses	: Analytical reagent. pCMV-Tag5A Mammalian Expression Vector 0.02 ml (20 µg 1 µg/µl) pCMV-Tag5B Mammalian Expression Vector 0.02 ml (20 µg 1 µg/µl) pCMV-Tag5C Mammalian Expression Vector 0.02 ml (20 µg 1 µg/µl) pCMV-Tag5 Expression Control Plasmid 0.02 ml (20 µg 1 µg/µl) XL1-Blue E. coli Strain 0.5 ml
Supplier/Manufacturer	: Agilent Technologies, Inc. 5301 Stevens Creek Blvd Santa Clara, CA 95051, USA 800-227-9770
Emergency telephone number (with hours of operation)	: CHEMTREC®: 1-800-424-9300

Section 2. Hazard identification

Classification of the substance or mixture

XL1-Blue E. coli Strain
H319 EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms : XL1-Blue E. coli Strain



Signal word	: pCMV-Tag5A Mammalian Expression Vector	No signal word.
	pCMV-Tag5B Mammalian Expression Vector	No signal word.
	pCMV-Tag5C Mammalian Expression Vector	No signal word.
	pCMV-Tag5 Expression Control Plasmid	No signal word.
	XL1-Blue E. coli Strain	Warning
Hazard statements	: pCMV-Tag5A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5 Expression	No known significant effects or critical hazards.

Section 2. Hazard identification

Control Plasmid
XL1-Blue E. coli Strain H319 - Causes serious eye irritation.

Precautionary statements

Prevention

: pCMV-Tag5A Mammalian Expression Vector Not applicable.
pCMV-Tag5B Mammalian Expression Vector Not applicable.
pCMV-Tag5C Mammalian Expression Vector Not applicable.
pCMV-Tag5 Expression Control Plasmid Not applicable.
XL1-Blue E. coli Strain P280 - Wear eye or face protection.

Response

: pCMV-Tag5A Mammalian Expression Vector Not applicable.
pCMV-Tag5B Mammalian Expression Vector Not applicable.
pCMV-Tag5C Mammalian Expression Vector Not applicable.
pCMV-Tag5 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.

Storage

: pCMV-Tag5A Mammalian Expression Vector Not applicable.
pCMV-Tag5B Mammalian Expression Vector Not applicable.
pCMV-Tag5C Mammalian Expression Vector Not applicable.
pCMV-Tag5 Expression Control Plasmid Not applicable.
XL1-Blue E. coli Strain Not applicable.

Disposal

: pCMV-Tag5A Mammalian Expression Vector Not applicable.
pCMV-Tag5B Mammalian Expression Vector Not applicable.
pCMV-Tag5C Mammalian Expression Vector Not applicable.
pCMV-Tag5 Expression Control Plasmid Not applicable.
XL1-Blue E. coli Strain Not applicable.

Supplemental label elements

: pCMV-Tag5A Mammalian Expression Vector None known.
pCMV-Tag5B Mammalian Expression Vector None known.
pCMV-Tag5C Mammalian Expression Vector None known.
pCMV-Tag5 Expression Control Plasmid None known.
XL1-Blue E. coli Strain None known.

Section 2. Hazard identification

Other hazards which do not result in classification	: pCMV-Tag5A Mammalian Expression Vector	None known.
	pCMV-Tag5B Mammalian Expression Vector	None known.
	pCMV-Tag5C Mammalian Expression Vector	None known.
	pCMV-Tag5 Expression Control Plasmid	None known.
	XL1-Blue E. coli Strain	None known.

Section 3. Composition/information on ingredients

Substance/mixture	: pCMV-Tag5A Mammalian Expression Vector	Mixture
	pCMV-Tag5B Mammalian Expression Vector	Mixture
	pCMV-Tag5C Mammalian Expression Vector	Mixture
	pCMV-Tag5 Expression Control Plasmid	Mixture
	XL1-Blue E. coli Strain	Mixture

Ingredient name	% (w/w)	CAS number
XL1-Blue E. coli Strain		
Glycerol	10 - 30	56-81-5
Sodium chloride	0.1 - 1	7647-14-5

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

Eye contact	: pCMV-Tag5A 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-Tag5B 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-Tag5C 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-Tag5 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. Get medical attention.

Section 4. First-aid measures

Inhalation	:	pCMV-Tag5A 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-Tag5B 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-Tag5C 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-Tag5 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.
Skin contact	:	pCMV-Tag5A Mammalian Expression Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pCMV-Tag5B Mammalian Expression Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pCMV-Tag5C Mammalian Expression Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pCMV-Tag5 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.
Ingestion	:	pCMV-Tag5A Mammalian Expression Vector	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
		pCMV-Tag5B Mammalian Expression Vector	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
		pCMV-Tag5C Mammalian Expression Vector	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless

Section 4. First-aid measures

pCMV-Tag5 Expression Control Plasmid	directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
XL1-Blue E. coli Strain	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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: pCMV-Tag5A Mammalian Expression Vector pCMV-Tag5B Mammalian Expression Vector pCMV-Tag5C Mammalian Expression Vector pCMV-Tag5 Expression Control Plasmid XL1-Blue E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes serious eye irritation.
Inhalation	: pCMV-Tag5A Mammalian Expression Vector pCMV-Tag5B Mammalian Expression Vector pCMV-Tag5C Mammalian Expression Vector pCMV-Tag5 Expression Control Plasmid XL1-Blue E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: pCMV-Tag5A Mammalian Expression Vector pCMV-Tag5B Mammalian Expression Vector pCMV-Tag5C Mammalian Expression Vector pCMV-Tag5 Expression Control Plasmid XL1-Blue E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Section 4. First-aid measures

Ingestion	:	pCMV-Tag5A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag5B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag5C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag5 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	pCMV-Tag5A Mammalian Expression Vector	No specific data.
		pCMV-Tag5B Mammalian Expression Vector	No specific data.
		pCMV-Tag5C Mammalian Expression Vector	No specific data.
		pCMV-Tag5 Expression Control Plasmid	No specific data.
		XL1-Blue E. coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	:	pCMV-Tag5A Mammalian Expression Vector	No specific data.
		pCMV-Tag5B Mammalian Expression Vector	No specific data.
		pCMV-Tag5C Mammalian Expression Vector	No specific data.
		pCMV-Tag5 Expression Control Plasmid	No specific data.
		XL1-Blue E. coli Strain	No specific data.
Skin contact	:	pCMV-Tag5A Mammalian Expression Vector	No specific data.
		pCMV-Tag5B Mammalian Expression Vector	No specific data.
		pCMV-Tag5C Mammalian Expression Vector	No specific data.
		pCMV-Tag5 Expression Control Plasmid	No specific data.
		XL1-Blue E. coli Strain	No specific data.
Ingestion	:	pCMV-Tag5A Mammalian Expression Vector	No specific data.
		pCMV-Tag5B Mammalian Expression Vector	No specific data.
		pCMV-Tag5C Mammalian Expression Vector	No specific data.
		pCMV-Tag5 Expression Control Plasmid	No specific data.
		XL1-Blue E. coli Strain	No specific data.

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

Section 4. First-aid measures

Notes to physician	: pCMV-Tag5A Mammalian Expression Vector pCMV-Tag5B Mammalian Expression Vector pCMV-Tag5C Mammalian Expression Vector pCMV-Tag5 Expression Control Plasmid XL1-Blue E. coli Strain	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. 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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: pCMV-Tag5A Mammalian Expression Vector pCMV-Tag5B Mammalian Expression Vector pCMV-Tag5C Mammalian Expression Vector pCMV-Tag5 Expression Control Plasmid XL1-Blue E. coli Strain	No specific treatment. No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: pCMV-Tag5A Mammalian Expression Vector pCMV-Tag5B Mammalian Expression Vector pCMV-Tag5C Mammalian Expression Vector pCMV-Tag5 Expression Control Plasmid XL1-Blue E. coli Strain	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. 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. 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

Extinguishing media

Suitable extinguishing media	: pCMV-Tag5A Mammalian Expression Vector pCMV-Tag5B Mammalian Expression Vector pCMV-Tag5C Mammalian Expression Vector pCMV-Tag5 Expression Control Plasmid XL1-Blue E. coli Strain	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. Use an extinguishing agent suitable for the surrounding fire.
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Section 5. Fire-fighting measures

Unsuitable extinguishing media	: pCMV-Tag5A Mammalian Expression Vector	None known.
	pCMV-Tag5B Mammalian Expression Vector	None known.
	pCMV-Tag5C Mammalian Expression Vector	None known.
	pCMV-Tag5 Expression Control Plasmid	None known.
	XL1-Blue E. coli Strain	None known.
Specific hazards arising from the chemical	: pCMV-Tag5A Mammalian Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV-Tag5B Mammalian Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV-Tag5C Mammalian Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV-Tag5 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.
Hazardous thermal decomposition products	: pCMV-Tag5A Mammalian Expression Vector	No specific data.
	pCMV-Tag5B Mammalian Expression Vector	No specific data.
	pCMV-Tag5C Mammalian Expression Vector	No specific data.
	pCMV-Tag5 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
Special protective actions for fire-fighters	: pCMV-Tag5A 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-Tag5B 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-Tag5C 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-Tag5 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.

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters	: pCMV-Tag5A 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-Tag5B 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-Tag5C 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-Tag5 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: pCMV-Tag5A 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-Tag5B 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-Tag5C 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-Tag5 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 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.

Section 6. Accidental release measures

For emergency responders	<p>pCMV-Tag5A Mammalian Expression Vector</p> <p>pCMV-Tag5B Mammalian Expression Vector</p> <p>pCMV-Tag5C Mammalian Expression Vector</p> <p>pCMV-Tag5 Expression Control Plasmid</p> <p>XL1-Blue E. coli Strain</p>	<p>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".</p> <p>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".</p> <p>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".</p> <p>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".</p> <p>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".</p>
Environmental precautions	<p>pCMV-Tag5A Mammalian Expression Vector</p> <p>pCMV-Tag5B Mammalian Expression Vector</p> <p>pCMV-Tag5C Mammalian Expression Vector</p> <p>pCMV-Tag5 Expression Control Plasmid</p> <p>XL1-Blue E. coli Strain</p>	<p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p>
<u>Methods and materials for containment and cleaning up</u>		
Methods for cleaning up	<p>pCMV-Tag5A Mammalian Expression Vector</p> <p>pCMV-Tag5B Mammalian Expression Vector</p>	<p>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.</p> <p>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</p>

Section 6. Accidental release measures

pCMV-Tag5C Mammalian Expression Vector	disposal container. Dispose of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
pCMV-Tag5 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

Precautions for safe handling

Protective measures

: pCMV-Tag5A Mammalian Expression Vector	Put on appropriate personal protective equipment (see Section 8).
pCMV-Tag5B Mammalian Expression Vector	Put on appropriate personal protective equipment (see Section 8).
pCMV-Tag5C Mammalian Expression Vector	Put on appropriate personal protective equipment (see Section 8).
pCMV-Tag5 Expression Control Plasmid	Put on appropriate personal protective equipment (see Section 8).
XL1-Blue E. coli Strain	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.

Advice on general occupational hygiene

: pCMV-Tag5A 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.
pCMV-Tag5B 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.
pCMV-Tag5C 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

Section 7. Handling and storage

	pCMV-Tag5 Expression Control Plasmid	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.
	XL1-Blue E. coli Strain	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.
<p>Conditions for safe storage, including any incompatibilities</p>	: pCMV-Tag5A Mammalian Expression Vector	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.
	pCMV-Tag5B Mammalian Expression Vector	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.
	pCMV-Tag5C Mammalian Expression Vector	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.
	pCMV-Tag5 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

Section 7. Handling and storage

XL1-Blue E. coli Strain

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 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
XL1-Blue E. coli Strain Glycerol	<p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist</p> <p>CA Quebec Provincial (Canada, 7/2019). TWAEV: 10 mg/m³ 8 hours. Form: mist</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m³ 15 minutes. Form: mist TWA: 10 mg/m³ 8 hours. Form: mist</p> <p>CA Ontario Provincial (Canada, 6/2019). TWA: 10 mg/m³ 8 hours. Form: mist</p> <p>CA British Columbia Provincial (Canada, 10/2019). TWA: 3 mg/m³ 8 hours. Form: respirable mist TWA: 10 mg/m³ 8 hours. Form: total mist</p>

- 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.

Section 8. Exposure controls/personal protection

- 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

Appearance

- | | | |
|-----------------------|--|----------------|
| Physical state | : pCMV-Tag5A Mammalian Expression Vector | Liquid. |
| | pCMV-Tag5B Mammalian Expression Vector | Liquid. |
| | pCMV-Tag5C Mammalian Expression Vector | Liquid. |
| | pCMV-Tag5 Expression Control Plasmid | Liquid. |
| | XL1-Blue E. coli Strain | Liquid. |
| Color | : pCMV-Tag5A Mammalian Expression Vector | Not available. |
| | pCMV-Tag5B Mammalian Expression Vector | Not available. |
| | pCMV-Tag5C Mammalian Expression Vector | Not available. |
| | pCMV-Tag5 Expression Control Plasmid | Not available. |
| | XL1-Blue E. coli Strain | Not available. |
| Odor | : pCMV-Tag5A Mammalian Expression Vector | Not available. |
| | pCMV-Tag5B Mammalian Expression Vector | Not available. |
| | pCMV-Tag5C Mammalian Expression Vector | Not available. |
| | pCMV-Tag5 Expression Control Plasmid | Not available. |
| | XL1-Blue E. coli Strain | Not available. |

Section 9. Physical and chemical properties

Odor threshold	: pCMV-Tag5A Mammalian Expression Vector	Not available.
	pCMV-Tag5B Mammalian Expression Vector	Not available.
	pCMV-Tag5C Mammalian Expression Vector	Not available.
	pCMV-Tag5 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Not available.
pH	: pCMV-Tag5A Mammalian Expression Vector	7.5
	pCMV-Tag5B Mammalian Expression Vector	7.5
	pCMV-Tag5C Mammalian Expression Vector	7.5
	pCMV-Tag5 Expression Control Plasmid	7.5
	XL1-Blue E. coli Strain	7.5
Melting point	: pCMV-Tag5A Mammalian Expression Vector	0°C (32°F)
	pCMV-Tag5B Mammalian Expression Vector	0°C (32°F)
	pCMV-Tag5C Mammalian Expression Vector	0°C (32°F)
	pCMV-Tag5 Expression Control Plasmid	0°C (32°F)
	XL1-Blue E. coli Strain	Not available.
Boiling point	: pCMV-Tag5A Mammalian Expression Vector	100°C (212°F)
	pCMV-Tag5B Mammalian Expression Vector	100°C (212°F)
	pCMV-Tag5C Mammalian Expression Vector	100°C (212°F)
	pCMV-Tag5 Expression Control Plasmid	100°C (212°F)
	XL1-Blue E. coli Strain	Not available.
Flash point	: pCMV-Tag5A Mammalian Expression Vector	Not available.
	pCMV-Tag5B Mammalian Expression Vector	Not available.
	pCMV-Tag5C Mammalian Expression Vector	Not available.
	pCMV-Tag5 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Not available.
Evaporation rate	: pCMV-Tag5A Mammalian Expression Vector	Not available.
	pCMV-Tag5B Mammalian Expression Vector	Not available.
	pCMV-Tag5C Mammalian Expression Vector	Not available.
	pCMV-Tag5 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Not available.

Section 9. Physical and chemical properties

Flammability (solid, gas)	:	pCMV-Tag5A Mammalian Expression Vector	Not applicable.
		pCMV-Tag5B Mammalian Expression Vector	Not applicable.
		pCMV-Tag5C Mammalian Expression Vector	Not applicable.
		pCMV-Tag5 Expression Control Plasmid	Not applicable.
		XL1-Blue E. coli Strain	Not applicable.
Lower and upper explosive (flammable) limits	:	pCMV-Tag5A Mammalian Expression Vector	Not available.
		pCMV-Tag5B Mammalian Expression Vector	Not available.
		pCMV-Tag5C Mammalian Expression Vector	Not available.
		pCMV-Tag5 Expression Control Plasmid	Not available.
		XL1-Blue E. coli Strain	Not available.
Vapor pressure	:	pCMV-Tag5A Mammalian Expression Vector	Not available.
		pCMV-Tag5B Mammalian Expression Vector	Not available.
		pCMV-Tag5C Mammalian Expression Vector	Not available.
		pCMV-Tag5 Expression Control Plasmid	Not available.
		XL1-Blue E. coli Strain	Not available.
Vapor density	:	pCMV-Tag5A Mammalian Expression Vector	Not available.
		pCMV-Tag5B Mammalian Expression Vector	Not available.
		pCMV-Tag5C Mammalian Expression Vector	Not available.
		pCMV-Tag5 Expression Control Plasmid	Not available.
		XL1-Blue E. coli Strain	Not available.
Relative density	:	pCMV-Tag5A Mammalian Expression Vector	Not available.
		pCMV-Tag5B Mammalian Expression Vector	Not available.
		pCMV-Tag5C Mammalian Expression Vector	Not available.
		pCMV-Tag5 Expression Control Plasmid	Not available.
		XL1-Blue E. coli Strain	Not available.
Solubility	:	pCMV-Tag5A Mammalian Expression Vector	Easily soluble in the following materials: cold water and hot water.
		pCMV-Tag5B Mammalian Expression Vector	Easily soluble in the following materials: cold water and hot water.
		pCMV-Tag5C Mammalian Expression Vector	Easily soluble in the following materials: cold water and hot water.
		pCMV-Tag5 Expression Control Plasmid	Easily soluble in the following materials: cold water and hot water.
		XL1-Blue E. coli Strain	Soluble in the following materials: cold water and hot water.

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water	: pCMV-Tag5A Mammalian Expression Vector	Not available.
	pCMV-Tag5B Mammalian Expression Vector	Not available.
	pCMV-Tag5C Mammalian Expression Vector	Not available.
	pCMV-Tag5 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Not available.
Auto-ignition temperature	: pCMV-Tag5A Mammalian Expression Vector	Not available.
	pCMV-Tag5B Mammalian Expression Vector	Not available.
	pCMV-Tag5C Mammalian Expression Vector	Not available.
	pCMV-Tag5 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Not available.
Decomposition temperature	: pCMV-Tag5A Mammalian Expression Vector	Not available.
	pCMV-Tag5B Mammalian Expression Vector	Not available.
	pCMV-Tag5C Mammalian Expression Vector	Not available.
	pCMV-Tag5 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Not available.
Viscosity	: pCMV-Tag5A Mammalian Expression Vector	Not available.
	pCMV-Tag5B Mammalian Expression Vector	Not available.
	pCMV-Tag5C Mammalian Expression Vector	Not available.
	pCMV-Tag5 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Not available.

Section 10. Stability and reactivity

Reactivity	: pCMV-Tag5A Mammalian Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCMV-Tag5B Mammalian Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCMV-Tag5C Mammalian Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCMV-Tag5 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.
Chemical stability	: pCMV-Tag5A Mammalian Expression Vector	The product is stable.
	pCMV-Tag5B Mammalian Expression Vector	The product is stable.
	pCMV-Tag5C Mammalian Expression Vector	The product is stable.
	pCMV-Tag5 Expression Control Plasmid	The product is stable.

Section 10. Stability and reactivity

	XL1-Blue E. coli Strain	The product is stable.
Possibility of hazardous reactions	<ul style="list-style-type: none"> : pCMV-Tag5A Mammalian Expression Vector pCMV-Tag5B Mammalian Expression Vector pCMV-Tag5C Mammalian Expression Vector pCMV-Tag5 Expression Control Plasmid XL1-Blue E. coli Strain 	<p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p>
Conditions to avoid	<ul style="list-style-type: none"> : pCMV-Tag5A Mammalian Expression Vector pCMV-Tag5B Mammalian Expression Vector pCMV-Tag5C Mammalian Expression Vector pCMV-Tag5 Expression Control Plasmid XL1-Blue E. coli Strain 	<p>No specific data.</p> <p>No specific data.</p> <p>No specific data.</p> <p>No specific data.</p> <p>No specific data.</p>
Incompatible materials	<ul style="list-style-type: none"> : pCMV-Tag5A Mammalian Expression Vector pCMV-Tag5B Mammalian Expression Vector pCMV-Tag5C Mammalian Expression Vector pCMV-Tag5 Expression Control Plasmid XL1-Blue E. coli Strain 	<p>May react or be incompatible with oxidizing materials.</p> <p>May react or be incompatible with oxidizing materials.</p> <p>May react or be incompatible with oxidizing materials.</p> <p>May react or be incompatible with oxidizing materials.</p> <p>May react or be incompatible with oxidizing materials.</p>
Hazardous decomposition products	<ul style="list-style-type: none"> : pCMV-Tag5A Mammalian Expression Vector pCMV-Tag5B Mammalian Expression Vector pCMV-Tag5C Mammalian Expression Vector pCMV-Tag5 Expression Control Plasmid XL1-Blue E. coli Strain 	<p>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</p> <p>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</p> <p>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</p> <p>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</p> <p>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</p>

Section 11. Toxicological information

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	-
Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<input checked="" type="checkbox"/> XL1-Blue E. coli Strain					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 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.

Information on the likely routes of exposure	: pCMV-Tag5A Mammalian Expression Vector	Not available.
	pCMV-Tag5B Mammalian Expression Vector	Not available.
	pCMV-Tag5C Mammalian Expression Vector	Not available.
	pCMV-Tag5 Expression Control Plasmid	Not available.
	XL1-Blue E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Section 11. Toxicological information

Eye contact	: pCMV-Tag5A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	Causes serious eye irritation.
Inhalation	: pCMV-Tag5A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	No known significant effects or critical hazards.
Skin contact	: pCMV-Tag5A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	No known significant effects or critical hazards.
Ingestion	: pCMV-Tag5A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5 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

Eye contact	: pCMV-Tag5A Mammalian Expression Vector	No specific data.
	pCMV-Tag5B Mammalian Expression Vector	No specific data.
	pCMV-Tag5C Mammalian Expression Vector	No specific data.
	pCMV-Tag5 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: pCMV-Tag5A Mammalian Expression Vector	No specific data.
	pCMV-Tag5B Mammalian Expression Vector	No specific data.
	pCMV-Tag5C Mammalian Expression Vector	No specific data.
	pCMV-Tag5 Expression	No specific data.

Section 11. Toxicological information

	Control Plasmid	
	XL1-Blue E. coli Strain	No specific data.
Skin contact	: pCMV-Tag5A Mammalian Expression Vector	No specific data.
	pCMV-Tag5B Mammalian Expression Vector	No specific data.
	pCMV-Tag5C Mammalian Expression Vector	No specific data.
	pCMV-Tag5 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	No specific data.
Ingestion	: pCMV-Tag5A Mammalian Expression Vector	No specific data.
	pCMV-Tag5B Mammalian Expression Vector	No specific data.
	pCMV-Tag5C Mammalian Expression Vector	No specific data.
	pCMV-Tag5 Expression Control Plasmid	No specific data.
	XL1-Blue E. coli Strain	No specific data.

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

General	: pCMV-Tag5A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5 Expression Control Plasmid	No known significant effects or critical hazards.
	XL1-Blue E. coli Strain	No known significant effects or critical hazards.
Carcinogenicity	: pCMV-Tag5A Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5B Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5C Mammalian Expression Vector	No known significant effects or critical hazards.
	pCMV-Tag5 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

Mutagenicity	:	pCMV-Tag5A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag5B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag5C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag5 Expression Control Plasmid	No known significant effects or critical hazards.
		XL1-Blue E. coli Strain	No known significant effects or critical hazards.
Reproductive toxicity	:	pCMV-Tag5A Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag5B Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag5C Mammalian Expression Vector	No known significant effects or critical hazards.
		pCMV-Tag5 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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
<input checked="" type="checkbox"/> XL1-Blue E. coli Strain					
XL1-Blue E. coli Strain	300000	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Sodium chloride	3000	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> XL1-Blue E. coli Strain			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks

Persistence and degradability

Section 12. Ecological information

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

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
XL1-Blue E. coli Strain Glycerol	-1.76	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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 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 14. Transport information

TDG / 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

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Section 15. Regulatory information

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	: All components are listed or exempted.
Canada	: Not determined.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : 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	: <input checked="" type="checkbox"/> All components are active or exempted.
Viet Nam	: Not determined.

Section 16. Other information

[History](#)

Date of issue/Date of revision	: 11/02/2020
Date of previous issue	: 09/11/2018
Version	: 6

[Key to abbreviations](#)

: ATE = Acute Toxicity Estimate
: BCF = Bioconcentration Factor
: GHS = Globally Harmonized System of Classification and Labelling of Chemicals
: HPR = Hazardous Products Regulations
: 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

[Procedure used to derive the classification](#)

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

References : Not available.

Indicates information that has changed from previously issued version.

Section 16. Other information

[Notice to reader](#)

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