

SAFETY DATA SHEET

InterPlay C-terminal Mammalian TAP Vectors, Part Number 240102

Section 1. Identification

Product identifier	: InterPlay C-terminal Mammalian TAP Vectors, Part Number 240102
Part no. (chemical kit)	: 240102
Part no.	: pCTAP-A Expression Vector 240102-51 pCTAP-B Expression Vector 240102-52 pCTAP-C Expression Vector 240102-53 pNTAP-Mef2a Expression Control Vector 240101-55 pCMV-Tag2-Mef2c Expression Control Vector 240101-54
Material uses	: Analytical reagent.
	pCTAP-A Expression Vector 0.02 ml (20 µg 1 µg/µl) pCTAP-B Expression Vector 0.02 ml (20 µg 1 µg/µl) pCTAP-C Expression Vector 0.02 ml (20 µg 1 µg/µl) pNTAP-Mef2a Expression Control Vector 0.03 ml (30 µg 1 µg/µl) pCMV-Tag2-Mef2c Expression Control Vector 0.03 ml (30 µg 1 µg/µl)
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

Not classified.

GHS label elements

Signal word	: pCTAP-A Expression Vector No signal word. pCTAP-B Expression Vector No signal word. pCTAP-C Expression Vector No signal word. pNTAP-Mef2a Expression Control Vector No signal word. pCMV-Tag2-Mef2c Expression Control Vector No signal word.
Hazard statements	: pCTAP-A Expression Vector No known significant effects or critical hazards. pCTAP-B Expression Vector No known significant effects or critical hazards. pCTAP-C Expression Vector No known significant effects or critical hazards. pNTAP-Mef2a Expression Control Vector No known significant effects or critical hazards. pCMV-Tag2-Mef2c Expression Control Vector No known significant effects or critical hazards.

Precautionary statements

Section 2. Hazard identification

Prevention	:	pCTAP-A Expression Vector	Not applicable.
		pCTAP-B Expression Vector	Not applicable.
		pCTAP-C Expression Vector	Not applicable.
		pNTAP-Mef2a Expression Control Vector	Not applicable.
		pCMV-Tag2-Mef2c Expression Control Vector	Not applicable.
Response	:	pCTAP-A Expression Vector	Not applicable.
		pCTAP-B Expression Vector	Not applicable.
		pCTAP-C Expression Vector	Not applicable.
		pNTAP-Mef2a Expression Control Vector	Not applicable.
		pCMV-Tag2-Mef2c Expression Control Vector	Not applicable.
Storage	:	pCTAP-A Expression Vector	Not applicable.
		pCTAP-B Expression Vector	Not applicable.
		pCTAP-C Expression Vector	Not applicable.
		pNTAP-Mef2a Expression Control Vector	Not applicable.
		pCMV-Tag2-Mef2c Expression Control Vector	Not applicable.
Disposal	:	pCTAP-A Expression Vector	Not applicable.
		pCTAP-B Expression Vector	Not applicable.
		pCTAP-C Expression Vector	Not applicable.
		pNTAP-Mef2a Expression Control Vector	Not applicable.
		pCMV-Tag2-Mef2c Expression Control Vector	Not applicable.
Supplemental label elements	:	pCTAP-A Expression Vector	None known.
		pCTAP-B Expression Vector	None known.
		pCTAP-C Expression Vector	None known.
		pNTAP-Mef2a Expression Control Vector	None known.
		pCMV-Tag2-Mef2c Expression Control Vector	None known.
Other hazards which do not result in classification	:	pCTAP-A Expression Vector	None known.
		pCTAP-B Expression Vector	None known.
		pCTAP-C Expression Vector	None known.
		pNTAP-Mef2a Expression Control Vector	None known.
		pCMV-Tag2-Mef2c Expression Control Vector	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	pCTAP-A Expression Vector	Mixture
		pCTAP-B Expression Vector	Mixture
		pCTAP-C Expression Vector	Mixture
		pNTAP-Mef2a Expression Control Vector	Mixture
		pCMV-Tag2-Mef2c Expression Control Vector	Mixture

There are no 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	: pCTAP-A 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.
	pCTAP-B 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.
	pCTAP-C 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.
	pNTAP-Mef2a Expression Control Vector	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	pCMV-Tag2-Mef2c Expression Control Vector	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: pCTAP-A Expression Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pCTAP-B Expression Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pCTAP-C Expression Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pNTAP-Mef2a Expression Control Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pCMV-Tag2-Mef2c Expression Control Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: pCTAP-A Expression Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pCTAP-B Expression Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pCTAP-C Expression Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pNTAP-Mef2a Expression Control Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pCMV-Tag2-Mef2c Expression Control Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: pCTAP-A Expression Vector	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	pCTAP-B Expression Vector	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce

Section 4. First-aid measures

pCTAP-C Expression Vector	vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
pNTAP-Mef2a Expression Control Vector	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
pCMV-Tag2-Mef2c Expression Control Vector	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: pCTAP-A Expression Vector	No known significant effects or critical hazards.
	pCTAP-B Expression Vector	No known significant effects or critical hazards.
	pCTAP-C Expression Vector	No known significant effects or critical hazards.
	pNTAP-Mef2a Expression Control Vector	No known significant effects or critical hazards.
	pCMV-Tag2-Mef2c Expression Control Vector	No known significant effects or critical hazards.
Inhalation	: pCTAP-A Expression Vector	No known significant effects or critical hazards.
	pCTAP-B Expression Vector	No known significant effects or critical hazards.
	pCTAP-C Expression Vector	No known significant effects or critical hazards.
	pNTAP-Mef2a Expression Control Vector	No known significant effects or critical hazards.
	pCMV-Tag2-Mef2c Expression Control Vector	No known significant effects or critical hazards.
Skin contact	: pCTAP-A Expression Vector	No known significant effects or critical hazards.
	pCTAP-B Expression Vector	No known significant effects or critical hazards.
	pCTAP-C Expression Vector	No known significant effects or critical hazards.
	pNTAP-Mef2a Expression Control Vector	No known significant effects or critical hazards.
	pCMV-Tag2-Mef2c Expression Control Vector	No known significant effects or critical hazards.
Ingestion	: pCTAP-A Expression Vector	No known significant effects or critical hazards.
	pCTAP-B Expression Vector	No known significant effects or critical hazards.
	pCTAP-C Expression Vector	No known significant effects or critical hazards.
	pNTAP-Mef2a Expression Control Vector	No known significant effects or critical hazards.
	pCMV-Tag2-Mef2c Expression Control Vector	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: pCTAP-A Expression Vector	No specific data.
	pCTAP-B Expression Vector	No specific data.
	pCTAP-C Expression Vector	No specific data.
	pNTAP-Mef2a Expression Control Vector	No specific data.
	pCMV-Tag2-Mef2c Expression Control Vector	No specific data.

Section 4. First-aid measures

Inhalation	:	pCTAP-A Expression Vector	No specific data.
		pCTAP-B Expression Vector	No specific data.
		pCTAP-C Expression Vector	No specific data.
		pNTAP-Mef2a Expression Control Vector	No specific data.
		pCMV-Tag2-Mef2c Expression Control Vector	No specific data.
Skin contact	:	pCTAP-A Expression Vector	No specific data.
		pCTAP-B Expression Vector	No specific data.
		pCTAP-C Expression Vector	No specific data.
		pNTAP-Mef2a Expression Control Vector	No specific data.
		pCMV-Tag2-Mef2c Expression Control Vector	No specific data.
Ingestion	:	pCTAP-A Expression Vector	No specific data.
		pCTAP-B Expression Vector	No specific data.
		pCTAP-C Expression Vector	No specific data.
		pNTAP-Mef2a Expression Control Vector	No specific data.
		pCMV-Tag2-Mef2c Expression Control Vector	No specific data.

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

Notes to physician	:	pCTAP-A Expression Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		pCTAP-B Expression Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		pCTAP-C Expression Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		pNTAP-Mef2a Expression Control Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		pCMV-Tag2-Mef2c Expression Control Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	pCTAP-A Expression Vector	No specific treatment.
		pCTAP-B Expression Vector	No specific treatment.
		pCTAP-C Expression Vector	No specific treatment.
		pNTAP-Mef2a Expression Control Vector	No specific treatment.
		pCMV-Tag2-Mef2c Expression Control Vector	No specific treatment.
Protection of first-aiders	:	pCTAP-A Expression Vector	No action shall be taken involving any personal risk or without suitable training.
		pCTAP-B Expression Vector	No action shall be taken involving any personal risk or without suitable training.
		pCTAP-C Expression Vector	No action shall be taken involving any personal risk or without suitable training.
		pNTAP-Mef2a Expression Control Vector	No action shall be taken involving any personal risk or without suitable training.
		pCMV-Tag2-Mef2c Expression Control Vector	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: pCTAP-A Expression Vector	Use an extinguishing agent suitable for the surrounding fire.
	pCTAP-B Expression Vector	Use an extinguishing agent suitable for the surrounding fire.
	pCTAP-C Expression Vector	Use an extinguishing agent suitable for the surrounding fire.
	pNTAP-Mef2a Expression Control Vector	Use an extinguishing agent suitable for the surrounding fire.
	pCMV-Tag2-Mef2c Expression Control Vector	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: pCTAP-A Expression Vector	None known.
	pCTAP-B Expression Vector	None known.
	pCTAP-C Expression Vector	None known.
	pNTAP-Mef2a Expression Control Vector	None known.
	pCMV-Tag2-Mef2c Expression Control Vector	None known.
Specific hazards arising from the chemical	: pCTAP-A Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCTAP-B Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCTAP-C Expression Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pNTAP-Mef2a Expression Control Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV-Tag2-Mef2c Expression Control Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: pCTAP-A Expression Vector	No specific data.
	pCTAP-B Expression Vector	No specific data.
	pCTAP-C Expression Vector	No specific data.
	pNTAP-Mef2a Expression Control Vector	No specific data.
	pCMV-Tag2-Mef2c Expression Control Vector	No specific data.
Special protective actions for fire-fighters	: pCTAP-A 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.
	pCTAP-B 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.
	pCTAP-C 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.
	pNTAP-Mef2a Expression Control Vector	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	pCMV-Tag2-Mef2c Expression Control Vector	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters	:	pCTAP-A 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.
		pCTAP-B 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.
		pCTAP-C 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.
		pNTAP-Mef2a Expression Control Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		pCMV-Tag2-Mef2c Expression Control Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	pCTAP-A 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.
		pCTAP-B 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.
		pCTAP-C 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.
		pNTAP-Mef2a Expression Control Vector	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
		pCMV-Tag2-Mef2c Expression Control Vector	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders	: pCTAP-A Expression Vector	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".
	pCTAP-B Expression Vector	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".
	pCTAP-C Expression Vector	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".
	pNTAP-Mef2a Expression Control Vector	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".
	pCMV-Tag2-Mef2c Expression Control Vector	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".

Environmental precautions	: pCTAP-A Expression Vector	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	pCTAP-B Expression Vector	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	pCTAP-C Expression Vector	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	pNTAP-Mef2a Expression Control Vector	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	pCMV-Tag2-Mef2c Expression Control Vector	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Methods for cleaning up	: pCTAP-A Expression Vector	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	pCTAP-B Expression Vector	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

pCTAP-C Expression Vector	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.
pNTAP-Mef2a Expression Control Vector	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
pCMV-Tag2-Mef2c Expression Control Vector	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

: pCTAP-A Expression Vector	Put on appropriate personal protective equipment (see Section 8).
pCTAP-B Expression Vector	Put on appropriate personal protective equipment (see Section 8).
pCTAP-C Expression Vector	Put on appropriate personal protective equipment (see Section 8).
pNTAP-Mef2a Expression Control Vector	Put on appropriate personal protective equipment (see Section 8).
pCMV-Tag2-Mef2c Expression Control Vector	Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene

: pCTAP-A 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.
pCTAP-B 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.
pCTAP-C 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.
pNTAP-Mef2a Expression Control Vector	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for

Section 7. Handling and storage

	<p>pCMV-Tag2-Mef2c Expression Control Vector</p>	<p>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.</p>
<p>Conditions for safe storage, including any incompatibilities</p>	<p>: pCTAP-A Expression Vector</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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	<p>pCTAP-B Expression Vector</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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	<p>pCTAP-C Expression Vector</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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	<p>pNTAP-Mef2a Expression Control Vector</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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	<p>pCMV-Tag2-Mef2c Expression Control Vector</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</p>

Section 7. Handling and storage

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

None.

- 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: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

Section 9. Physical and chemical properties and safety characteristics

Physical state	:	pCTAP-A Expression Vector	Liquid.
		pCTAP-B Expression Vector	Liquid.
		pCTAP-C Expression Vector	Liquid.
		pNTAP-Mef2a Expression	Liquid.
		Control Vector	
		pCMV-Tag2-Mef2c	Liquid.
		Expression Control Vector	
Color	:	pCTAP-A Expression Vector	Not available.
		pCTAP-B Expression Vector	Not available.
		pCTAP-C Expression Vector	Not available.
		pNTAP-Mef2a Expression	Not available.
		Control Vector	
		pCMV-Tag2-Mef2c	Not available.
		Expression Control Vector	
Odor	:	pCTAP-A Expression Vector	Not available.
		pCTAP-B Expression Vector	Not available.
		pCTAP-C Expression Vector	Not available.
		pNTAP-Mef2a Expression	Not available.
		Control Vector	
		pCMV-Tag2-Mef2c	Not available.
		Expression Control Vector	
Odor threshold	:	pCTAP-A Expression Vector	Not available.
		pCTAP-B Expression Vector	Not available.
		pCTAP-C Expression Vector	Not available.
		pNTAP-Mef2a Expression	Not available.
		Control Vector	
		pCMV-Tag2-Mef2c	Not available.
		Expression Control Vector	
pH	:	pCTAP-A Expression Vector	7.5
		pCTAP-B Expression Vector	7.5
		pCTAP-C Expression Vector	7.5
		pNTAP-Mef2a Expression	7.5
		Control Vector	
		pCMV-Tag2-Mef2c	7.5
		Expression Control Vector	
Melting point/freezing point	:	pCTAP-A Expression Vector	0°C (32°F)
		pCTAP-B Expression Vector	0°C (32°F)
		pCTAP-C Expression Vector	0°C (32°F)
		pNTAP-Mef2a Expression	0°C (32°F)
		Control Vector	
		pCMV-Tag2-Mef2c	0°C (32°F)
		Expression Control Vector	
Boiling point, initial boiling point, and boiling range	:	pCTAP-A Expression Vector	100°C (212°F)
		pCTAP-B Expression Vector	100°C (212°F)
		pCTAP-C Expression Vector	100°C (212°F)
		pNTAP-Mef2a Expression	100°C (212°F)
		Control Vector	
		pCMV-Tag2-Mef2c	100°C (212°F)
		Expression Control Vector	
Flash point	:		

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
pCTAP-A Expression Vector						
Edetic acid	>100	>212	DIN 51758			
pCTAP-B Expression Vector						
Edetic acid	>100	>212	DIN 51758			
pCTAP-C Expression Vector						
Edetic acid	>100	>212	DIN 51758			
pNTAP-Mef2a Expression Control Vector						
Edetic acid	>100	>212	DIN 51758			
pCMV-Tag2-Mef2c Expression Control Vector						
Edetic acid	>100	>212	DIN 51758			

Evaporation rate : pCTAP-A Expression Vector Not available.
pCTAP-B Expression Vector Not available.
pCTAP-C Expression Vector Not available.
pNTAP-Mef2a Expression Control Vector Not available.
pCMV-Tag2-Mef2c Expression Control Vector Not available.

Flammability : pCTAP-A Expression Vector Not applicable.
pCTAP-B Expression Vector Not applicable.
pCTAP-C Expression Vector Not applicable.
pNTAP-Mef2a Expression Control Vector Not applicable.
pCMV-Tag2-Mef2c Expression Control Vector Not applicable.

Lower and upper explosion limit/flammability limit : pCTAP-A Expression Vector Not available.
pCTAP-B Expression Vector Not available.
pCTAP-C Expression Vector Not available.
pNTAP-Mef2a Expression Control Vector Not available.
pCMV-Tag2-Mef2c Expression Control Vector Not available.

Vapor pressure :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method

Section 9. Physical and chemical properties and safety characteristics

pCTAP-A Expression Vector						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
pCTAP-B Expression Vector						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
pCTAP-C Expression Vector						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
pNTAP-Mef2a Expression Control Vector						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
pCMV-Tag2-Mef2c Expression Control Vector						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	

Relative vapor density :

- pCTAP-A Expression Vector Not available.
- pCTAP-B Expression Vector Not available.
- pCTAP-C Expression Vector Not available.
- pNTAP-Mef2a Expression Control Vector Not available.
- pCMV-Tag2-Mef2c Expression Control Vector Not available.

Relative density :

- pCTAP-A Expression Vector Not available.
- pCTAP-B Expression Vector Not available.
- pCTAP-C Expression Vector Not available.
- pNTAP-Mef2a Expression Control Vector Not available.
- pCMV-Tag2-Mef2c Expression Control Vector Not available.

Section 9. Physical and chemical properties and safety characteristics

Solubility :

- pCTAP-A Expression Vector Easily soluble in the following materials: cold water and hot water.
- pCTAP-B Expression Vector Easily soluble in the following materials: cold water and hot water.
- pCTAP-C Expression Vector Easily soluble in the following materials: cold water and hot water.
- pNTAP-Mef2a Expression Control Vector Easily soluble in the following materials: cold water and hot water.
- pCMV-Tag2-Mef2c Expression Control Vector Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water :

- pCTAP-A Expression Vector Not applicable.
- pCTAP-B Expression Vector Not applicable.
- pCTAP-C Expression Vector Not applicable.
- pNTAP-Mef2a Expression Control Vector Not applicable.
- pCMV-Tag2-Mef2c Expression Control Vector Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
pCTAP-A Expression Vector			
Edetic acid	>400	>752	VDI 2263
pCTAP-B Expression Vector			
Edetic acid	>400	>752	VDI 2263
pCTAP-C Expression Vector			
Edetic acid	>400	>752	VDI 2263
pNTAP-Mef2a Expression Control Vector			
Edetic acid	>400	>752	VDI 2263
pCMV-Tag2-Mef2c Expression Control Vector			
Edetic acid	>400	>752	VDI 2263

Decomposition temperature :

- pCTAP-A Expression Vector Not available.
- pCTAP-B Expression Vector Not available.
- pCTAP-C Expression Vector Not available.
- pNTAP-Mef2a Expression Control Vector Not available.
- pCMV-Tag2-Mef2c Expression Control Vector Not available.

Viscosity :

- pCTAP-A Expression Vector Not available.
- pCTAP-B Expression Vector Not available.
- pCTAP-C Expression Vector Not available.
- pNTAP-Mef2a Expression Control Vector Not available.
- pCMV-Tag2-Mef2c Expression Control Vector Not available.

Particle characteristics

Section 9. Physical and chemical properties and safety characteristics

Median particle size	: pCTAP-A Expression Vector	Not applicable.
	pCTAP-B Expression Vector	Not applicable.
	pCTAP-C Expression Vector	Not applicable.
	pNTAP-Mef2a Expression Control Vector	Not applicable.
	pCMV-Tag2-Mef2c Expression Control Vector	Not applicable.

Section 10. Stability and reactivity

Reactivity	: pCTAP-A Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCTAP-B Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCTAP-C Expression Vector	No specific test data related to reactivity available for this product or its ingredients.
	pNTAP-Mef2a Expression Control Vector	No specific test data related to reactivity available for this product or its ingredients.
	pCMV-Tag2-Mef2c Expression Control Vector	No specific test data related to reactivity available for this product or its ingredients.

Chemical stability	: pCTAP-A Expression Vector	The product is stable.
	pCTAP-B Expression Vector	The product is stable.
	pCTAP-C Expression Vector	The product is stable.
	pNTAP-Mef2a Expression Control Vector	The product is stable.
	pCMV-Tag2-Mef2c Expression Control Vector	The product is stable.

Possibility of hazardous reactions	: pCTAP-A Expression Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pCTAP-B Expression Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pCTAP-C Expression Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pNTAP-Mef2a Expression Control Vector	Under normal conditions of storage and use, hazardous reactions will not occur.
	pCMV-Tag2-Mef2c Expression Control Vector	Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid	: pCTAP-A Expression Vector	No specific data.
	pCTAP-B Expression Vector	No specific data.
	pCTAP-C Expression Vector	No specific data.
	pNTAP-Mef2a Expression Control Vector	No specific data.
	pCMV-Tag2-Mef2c Expression Control Vector	No specific data.

Incompatible materials	: pCTAP-A Expression Vector	May react or be incompatible with oxidizing materials.
	pCTAP-B Expression Vector	May react or be incompatible with oxidizing materials.
	pCTAP-C Expression Vector	May react or be incompatible with oxidizing materials.
	pNTAP-Mef2a Expression Control Vector	May react or be incompatible with oxidizing materials.
	pCMV-Tag2-Mef2c Expression Control Vector	May react or be incompatible with oxidizing materials.

Section 10. Stability and reactivity

Hazardous decomposition products	: pCTAP-A Expression Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pCTAP-B Expression Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pCTAP-C Expression Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pNTAP-Mef2a Expression Control Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pCMV-Tag2-Mef2c Expression Control Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

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	: pCTAP-A Expression Vector	Not available.
	pCTAP-B Expression Vector	Not available.
	pCTAP-C Expression Vector	Not available.
	pNTAP-Mef2a Expression Control Vector	Not available.
	pCMV-Tag2-Mef2c Expression Control Vector	Not available.

Potential acute health effects

Section 11. Toxicological information

Eye contact	: pCTAP-A Expression Vector	No known significant effects or critical hazards.
	pCTAP-B Expression Vector	No known significant effects or critical hazards.
	pCTAP-C Expression Vector	No known significant effects or critical hazards.
	pNTAP-Mef2a Expression Control Vector	No known significant effects or critical hazards.
	pCMV-Tag2-Mef2c Expression Control Vector	No known significant effects or critical hazards.
Inhalation	: pCTAP-A Expression Vector	No known significant effects or critical hazards.
	pCTAP-B Expression Vector	No known significant effects or critical hazards.
	pCTAP-C Expression Vector	No known significant effects or critical hazards.
	pNTAP-Mef2a Expression Control Vector	No known significant effects or critical hazards.
	pCMV-Tag2-Mef2c Expression Control Vector	No known significant effects or critical hazards.
Skin contact	: pCTAP-A Expression Vector	No known significant effects or critical hazards.
	pCTAP-B Expression Vector	No known significant effects or critical hazards.
	pCTAP-C Expression Vector	No known significant effects or critical hazards.
	pNTAP-Mef2a Expression Control Vector	No known significant effects or critical hazards.
	pCMV-Tag2-Mef2c Expression Control Vector	No known significant effects or critical hazards.
Ingestion	: pCTAP-A Expression Vector	No known significant effects or critical hazards.
	pCTAP-B Expression Vector	No known significant effects or critical hazards.
	pCTAP-C Expression Vector	No known significant effects or critical hazards.
	pNTAP-Mef2a Expression Control Vector	No known significant effects or critical hazards.
	pCMV-Tag2-Mef2c Expression Control Vector	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: pCTAP-A Expression Vector	No specific data.
	pCTAP-B Expression Vector	No specific data.
	pCTAP-C Expression Vector	No specific data.
	pNTAP-Mef2a Expression Control Vector	No specific data.
	pCMV-Tag2-Mef2c Expression Control Vector	No specific data.
Inhalation	: pCTAP-A Expression Vector	No specific data.
	pCTAP-B Expression Vector	No specific data.
	pCTAP-C Expression Vector	No specific data.
	pNTAP-Mef2a Expression Control Vector	No specific data.
	pCMV-Tag2-Mef2c Expression Control Vector	No specific data.
Skin contact	: pCTAP-A Expression Vector	No specific data.
	pCTAP-B Expression Vector	No specific data.
	pCTAP-C Expression Vector	No specific data.
	pNTAP-Mef2a Expression Control Vector	No specific data.
	pCMV-Tag2-Mef2c Expression Control Vector	No specific data.
Ingestion	: pCTAP-A Expression Vector	No specific data.
	pCTAP-B Expression Vector	No specific data.
	pCTAP-C Expression Vector	No specific data.
	pNTAP-Mef2a Expression Control Vector	No specific data.
	pCMV-Tag2-Mef2c Expression Control Vector	No specific data.

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : pCTAP-A Expression Vector No known significant effects or critical hazards.
 pCTAP-B Expression Vector No known significant effects or critical hazards.
 pCTAP-C Expression Vector No known significant effects or critical hazards.
 pNTAP-Mef2a Expression Control Vector No known significant effects or critical hazards.
 pCMV-Tag2-Mef2c Expression Control Vector No known significant effects or critical hazards.

Carcinogenicity : pCTAP-A Expression Vector No known significant effects or critical hazards.
 pCTAP-B Expression Vector No known significant effects or critical hazards.
 pCTAP-C Expression Vector No known significant effects or critical hazards.
 pNTAP-Mef2a Expression Control Vector No known significant effects or critical hazards.
 pCMV-Tag2-Mef2c Expression Control Vector No known significant effects or critical hazards.

Mutagenicity : pCTAP-A Expression Vector No known significant effects or critical hazards.
 pCTAP-B Expression Vector No known significant effects or critical hazards.
 pCTAP-C Expression Vector No known significant effects or critical hazards.
 pNTAP-Mef2a Expression Control Vector No known significant effects or critical hazards.
 pCMV-Tag2-Mef2c Expression Control Vector No known significant effects or critical hazards.

Reproductive toxicity : pCTAP-A Expression Vector No known significant effects or critical hazards.
 pCTAP-B Expression Vector No known significant effects or critical hazards.
 pCTAP-C Expression Vector No known significant effects or critical hazards.
 pNTAP-Mef2a Expression Control Vector No known significant effects or critical hazards.
 pCMV-Tag2-Mef2c Expression Control Vector No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Section 12. Ecological information

Bioaccumulative potential

Not available.

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

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.

Section 15. Regulatory information

Inventory list

Australia	: Not determined.
Canada	: Not determined.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (CSCL) : Not determined. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
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 : 05/16/2022

Date of previous issue : 08/21/2019

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
Not classified.	

References : Not available.

Indicates information that has changed from previously issued version.

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