InterPlay Adenoviral C-terminal TAP Vectors, Part Number 240216

Section 1. Identification

1.1 Product identifier

Product name : InterPlay Adenoviral C-terminal TAP Vectors, Part Number 240216
Part No. (Chemical Kit) : 240216
Part No. :
Adenoviral pCTAP Shuttle Vector - A 240216-51
Adenoviral pCTAP Shuttle Vector - B 240216-52
pCTAP Shuttle vector-C 240216-53
Adenoviral pTAP Shuttle-CAT Vector 240217-51
pShuttle-CMV-lacZ Control Vector 240008-51

Validation date : 3/30/2017

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

Material uses :
Analytical reagent.

Adenoviral pCTAP Shuttle Vector - A 0.02 ml (20 µg 1 µg/µl)
Adenoviral pCTAP Shuttle Vector - B 0.02 ml (20 µg 1 µg/µl)
pCTAP Shuttle vector-C 0.02 ml
Adenoviral pTAP Shuttle-CAT Vector 0.02 ml (20 µg 1 µg/µl)
pShuttle-CMV-lacZ Control Vector 0.01 ml (10 µg 1 µg/µl)

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

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

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status :
Adenoviral pCTAP Shuttle Vector - A
While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Adenoviral pCTAP Shuttle Vector - B
While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

pCTAP Shuttle vector-C
While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Adenoviral pTAP Shuttle-CAT Vector
While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to
## Classification of the substance or mixture

Not classified.

### 2.2 GHS label elements

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Hazard statements</th>
<th>Precautionary statements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pShuttle-CMV-lacZ Control Vector</strong></td>
<td>Adenoviral pCTAP Shuttle Vector -A</td>
<td>Adenoviral pCTAP Shuttle Vector -A</td>
</tr>
<tr>
<td></td>
<td>No signal word.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pCTAP Shuttle Vector -B</td>
<td>Adenoviral pCTAP Shuttle Vector -B</td>
</tr>
<tr>
<td></td>
<td>No signal word.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>pCTAP Shuttle vector-C</td>
<td>pCTAP Shuttle vector-C</td>
</tr>
<tr>
<td></td>
<td>No signal word.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
</tr>
<tr>
<td></td>
<td>No signal word.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>pShuttle-CMV-lacZ Control Vector</td>
</tr>
<tr>
<td></td>
<td>No signal word.</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

## Classification of the substance or mixture

Not classified.

## The safe handling and proper use of the product

This SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Section 2. Hazards identification

### Supplemental label elements:

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Supplemental label elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenoviral pCTAP Shuttle Vector - A</td>
<td>None known.</td>
</tr>
<tr>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>None known.</td>
</tr>
<tr>
<td>pCTAP Shuttle vector-C</td>
<td>None known.</td>
</tr>
<tr>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>None known.</td>
</tr>
<tr>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>None known.</td>
</tr>
</tbody>
</table>

### 2.3 Other hazards

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Supplemental label elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenoviral pCTAP Shuttle Vector - A</td>
<td>None known.</td>
</tr>
<tr>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>None known.</td>
</tr>
<tr>
<td>pCTAP Shuttle vector-C</td>
<td>None known.</td>
</tr>
<tr>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>None known.</td>
</tr>
<tr>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>None known.</td>
</tr>
</tbody>
</table>

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenoviral pCTAP Shuttle Vector - A</td>
<td>Mixture</td>
</tr>
<tr>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>Mixture</td>
</tr>
<tr>
<td>pCTAP Shuttle vector-C</td>
<td>Mixture</td>
</tr>
<tr>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>Mixture</td>
</tr>
<tr>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>Mixture</td>
</tr>
</tbody>
</table>

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

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

### 4.1 Description of necessary first aid measures

#### Eye contact

- **Adenoviral pCTAP Shuttle Vector - A**
  - Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

- **Adenoviral pCTAP Shuttle Vector - B**
  - Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

- **pCTAP Shuttle vector-C**
  - Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

- **Adenoviral pTAP Shuttle-CAT Vector**
  - Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
### Section 4. First aid measures

<table>
<thead>
<tr>
<th></th>
<th>pShuttle-CMV-lacZ Control Vector</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inhalation</strong></td>
<td>Adenoviral pCTAP Shuttle Vector -A</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pCTAP Shuttle Vector -B</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td></td>
<td>pCTAP Shuttle vector-C</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td></td>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>Adenoviral pCTAP Shuttle Vector -A</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pCTAP Shuttle Vector -B</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td></td>
<td>pCTAP Shuttle vector-C</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td></td>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Adenoviral pCTAP Shuttle Vector -A</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pCTAP Shuttle Vector -B</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>pCTAP Shuttle vector-C</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>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.</td>
</tr>
</tbody>
</table>
Section 4. First aid measures

pShuttle-CMV-lacZ Control Vector 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. 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.

4.2 Most important symptoms/effects, acute and delayed

<table>
<thead>
<tr>
<th>Potential acute health effects</th>
</tr>
</thead>
</table>

**Eye contact**

| Adenoviral pCTAP Shuttle Vector - A | No known significant effects or critical hazards. |
| Adenoviral pCTAP Shuttle Vector - B | No known significant effects or critical hazards. |
| pCTAP Shuttle vector-C | No known significant effects or critical hazards. |
| Adenoviral pTAP Shuttle-CAT Vector | No known significant effects or critical hazards. |
| pShuttle-CMV-lacZ Control Vector | No known significant effects or critical hazards. |

**Inhalation**

| Adenoviral pCTAP Shuttle Vector - A | No known significant effects or critical hazards. |
| Adenoviral pCTAP Shuttle Vector - B | No known significant effects or critical hazards. |
| pCTAP Shuttle vector-C | No known significant effects or critical hazards. |
| Adenoviral pTAP Shuttle-CAT Vector | No known significant effects or critical hazards. |
| pShuttle-CMV-lacZ Control Vector | No known significant effects or critical hazards. |

**Skin contact**

| Adenoviral pCTAP Shuttle Vector - A | No known significant effects or critical hazards. |
| Adenoviral pCTAP Shuttle Vector - B | No known significant effects or critical hazards. |
| pCTAP Shuttle vector-C | No known significant effects or critical hazards. |
| Adenoviral pTAP Shuttle-CAT Vector | No known significant effects or critical hazards. |
| pShuttle-CMV-lacZ Control Vector | No known significant effects or critical hazards. |

**Ingestion**

| Adenoviral pCTAP Shuttle Vector - A | No known significant effects or critical hazards. |
| Adenoviral pCTAP Shuttle Vector - B | No known significant effects or critical hazards. |
| pCTAP Shuttle vector-C | No known significant effects or critical hazards. |
| Adenoviral pTAP Shuttle-CAT Vector | No known significant effects or critical hazards. |
| pShuttle-CMV-lacZ Control Vector | No known significant effects or critical hazards. |

**Over-exposure signs/symptoms**

| Adenoviral pCTAP Shuttle Vector - A | No specific data. |
| Adenoviral pCTAP Shuttle Vector - B | No specific data. |
| pCTAP Shuttle vector-C | No specific data. |
| Adenoviral pTAP Shuttle-CAT Vector | No specific data. |
| pShuttle-CMV-lacZ Control Vector | No specific data. |
# Section 4. First aid measures

<table>
<thead>
<tr>
<th>Ingestion</th>
<th>Adenoviral pCTAP Shuttle Vector - A</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>pCTAP Shuttle vector-C</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>Adenoviral pCTAP Shuttle Vector - A</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>pCTAP Shuttle vector-C</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingestion</th>
<th>Adenoviral pCTAP Shuttle Vector - A</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>pCTAP Shuttle vector-C</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specific treatments</th>
<th>Adenoviral pCTAP Shuttle Vector - A</th>
<th>No specific treatment.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td></td>
<td>pCTAP Shuttle vector-C</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td></td>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>No specific treatment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Protection of first-aiders</th>
<th>Adenoviral pCTAP Shuttle Vector - A</th>
<th>No action shall be taken involving any personal risk or without suitable training.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
<tr>
<td></td>
<td>pCTAP Shuttle vector-C</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Notes to physician</th>
<th>Adenoviral pCTAP Shuttle Vector - A</th>
<th>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
</tr>
<tr>
<td></td>
<td>pCTAP Shuttle vector-C</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
</tr>
<tr>
<td></td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
</tr>
<tr>
<td></td>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
</tr>
</tbody>
</table>
Section 4. First aid measures

<table>
<thead>
<tr>
<th>Vector</th>
<th>No action shall be taken involving any personal risk or without suitable training.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td></td>
</tr>
</tbody>
</table>

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:

- Adenoviral pCTAP Shuttle Vector - A
- Adenoviral pCTAP Shuttle Vector - B
- PCAT Shuttle vector-C
- Adenoviral pTAP Shuttle-CAT Vector
- pShuttle-CMV-lacZ Control Vector

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:

- Adenoviral pCTAP Shuttle Vector - A
- Adenoviral pCTAP Shuttle Vector - B
- PCAT Shuttle vector-C
- Adenoviral pTAP Shuttle-CAT Vector
- pShuttle-CMV-lacZ Control Vector

None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical:

- Adenoviral pCTAP Shuttle Vector - A
- Adenoviral pCTAP Shuttle Vector - B
- PCAT Shuttle vector-C
- Adenoviral pTAP Shuttle-CAT Vector
- pShuttle-CMV-lacZ Control Vector

In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products:

- Adenoviral pCTAP Shuttle Vector - A
- Adenoviral pCTAP Shuttle Vector - B
- PCAT Shuttle vector-C
- Adenoviral pTAP Shuttle-CAT Vector
- pShuttle-CMV-lacZ Control Vector

No specific data.

5.3 Advice for firefighters

Special protective actions for fire-fighters:

- Adenoviral pCTAP Shuttle Vector - A
- Adenoviral pCTAP Shuttle Vector - B

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Section 5. Fire-fighting measures

pCTAP Shuttle vector-C
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Adenoviral pTAP Shuttle-CAT Vector
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

pShuttle-CMV-lacZ Control Vector
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters:

Adenoviral pCTAP Shuttle Vector - A
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Adenoviral pCTAP Shuttle Vector - B
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

pCTAP Shuttle vector-C
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Adenoviral pTAP Shuttle-CAT Vector
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

pShuttle-CMV-lacZ Control Vector
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Adenoviral pCTAP Shuttle Vector - A
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

Adenoviral pCTAP Shuttle Vector - B
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

pCTAP Shuttle vector-C
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

Adenoviral pTAP Shuttle-CAT Vector
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
## Section 6. Accidental release measures

| pShuttle-CMV-lacZ Control Vector | appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. |
| Adenoviral pCTAP Shuttle Vector - A | For emergency responders: 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". |
| Adenoviral pCTAP Shuttle Vector - B | 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 Shuttle vector-C | 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". |
| Adenoviral pTAP Shuttle-CAT 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). |
| pShuttle-CMV-lacZ 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). |

### 6.2 Environmental precautions:

| pShuttle-CMV-lacZ 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). |
| Adenoviral pCTAP Shuttle Vector - A | 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). |
| Adenoviral pCTAP Shuttle Vector - B | 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 Shuttle vector-C | 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). |
| Adenoviral pTAP Shuttle-CAT 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). |
| pShuttle-CMV-lacZ 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). |

### 6.3 Methods and materials for containment and cleaning up

**Date of issue:** 03/30/2017
Section 6. Accidental release measures

Methods for cleaning up:

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

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

- **pCTAP Shuttle vector-C**
  - Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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

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

Section 7. Handling and storage

7.1 Precautions for safe handling

**Protective measures**

- **Adenoviral pCTAP Shuttle Vector - A**
  - Put on appropriate personal protective equipment (see Section 8).

- **Adenoviral pCTAP Shuttle Vector - B**
  - Put on appropriate personal protective equipment (see Section 8).

- **pCTAP Shuttle vector-C**
  - Put on appropriate personal protective equipment (see Section 8).

- **Adenoviral pTAP Shuttle-CAT Vector**
  - Put on appropriate personal protective equipment (see Section 8).

- **pShuttle-CMV-lacZ Control Vector**
  - Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene**

- **Adenoviral pCTAP Shuttle Vector - A**
  - Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- **Adenoviral pCTAP Shuttle Vector - B**
  - Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- **pCTAP Shuttle vector-C**
  - Eating, drinking and smoking should be prohibited...
in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Adenoviral pTAP Shuttle-CAT Vector

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Adenoviral pCTAP Shuttle Vector - A

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.

Adenoviral pCTAP Shuttle Vector - B

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.

pCTAP Shuttle vector-C

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.

Adenoviral pTAP Shuttle-CAT 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.
Section 7. Handling and storage

pShuttle-CMV-lacZ Control Vector

Containers. Use appropriate containment to avoid environmental contamination. 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.

7.3 Specific end use(s)

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Industrial sector specific solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenoviral pCTAP Shuttle Vector - A</td>
<td>Industrial applications, Professional applications.</td>
</tr>
<tr>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>Industrial applications, Professional applications.</td>
</tr>
<tr>
<td>pCTAP Shuttle vector-C</td>
<td>Industrial applications, Professional applications.</td>
</tr>
<tr>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>Industrial applications, Professional applications.</td>
</tr>
<tr>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>Industrial applications, Professional applications.</td>
</tr>
</tbody>
</table>

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>None.</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls:

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures:

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.

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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

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical state**: Adenoviral pCTAP Shuttle Vector - Liquid.  
B: pCTAP Shuttle vector-C Liquid.  
Adenoviral pTAP Shuttle-CAT Liquid.  
pShuttle-CMV-lacZ Control Vector Liquid.

**Color**: Adenoviral pCTAP Shuttle Vector - Not available.  
A: Adenoviral pCTAP Shuttle Vector - Not available.  
B: pCTAP Shuttle vector-C Not available.  
Adenoviral pTAP Shuttle-CAT Not available.  
pShuttle-CMV-lacZ Control Vector Not available.

**Odor**: Adenoviral pCTAP Shuttle Vector - Not available.  
A: Adenoviral pCTAP Shuttle Vector - Not available.  
B: pCTAP Shuttle vector-C Not available.  
Adenoviral pTAP Shuttle-CAT Not available.  
pShuttle-CMV-lacZ Control Vector Not available.

**Odor threshold**

A: Adenoviral pCTAP Shuttle Vector - Not available.  
Adenoviral pCTAP Shuttle Vector - Not available.  
pCTAP Shuttle vector-C Not available.  
Adenoviral pTAP Shuttle-CAT Not available.  
pShuttle-CMV-lacZ Control Vector Not available.

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Section 9. Physical and chemical properties

**pH**
- Adenoviral pCTAP Shuttle Vector - A: 7.5
- Adenoviral pCTAP Shuttle Vector - B: 7.5
- pCTAP Shuttle vector-C: 7.5
- Adenoviral pTAP Shuttle-CAT Vector: 7.5
- pShuttle-CMV-lacZ Control Vector: 7.5

**Melting point**
- Adenoviral pCTAP Shuttle Vector - A: 0°C (32°F)
- Adenoviral pCTAP Shuttle Vector - B: 0°C (32°F)
- pCTAP Shuttle vector-C: 0°C (32°F)
- Adenoviral pTAP Shuttle-CAT Vector: 0°C (32°F)
- pShuttle-CMV-lacZ Control Vector: 0°C (32°F)

**Boiling point**
- Adenoviral pCTAP Shuttle Vector - A: 100°C (212°F)
- Adenoviral pCTAP Shuttle Vector - B: 100°C (212°F)
- pCTAP Shuttle vector-C: 100°C (212°F)
- Adenoviral pTAP Shuttle-CAT Vector: 100°C (212°F)
- pShuttle-CMV-lacZ Control Vector: 100°C (212°F)

**Flash point**
- Adenoviral pCTAP Shuttle Vector - A: Not available.
- Adenoviral pCTAP Shuttle Vector - B: Not available.
- pCTAP Shuttle vector-C: Not available.
- Adenoviral pTAP Shuttle-CAT Vector: Not available.
- pShuttle-CMV-lacZ Control Vector: Not available.

**Evaporation rate**
- Adenoviral pCTAP Shuttle Vector - A: Not available.
- Adenoviral pCTAP Shuttle Vector - B: Not available.
- pCTAP Shuttle vector-C: Not available.
- Adenoviral pTAP Shuttle-CAT Vector: Not available.
- pShuttle-CMV-lacZ Control Vector: Not available.

**Flammability (solid, gas)**
- Adenoviral pCTAP Shuttle Vector - A: Not applicable.
- Adenoviral pCTAP Shuttle Vector - B: Not applicable.
- pCTAP Shuttle vector-C: Not applicable.
- Adenoviral pTAP Shuttle-CAT Vector: Not applicable.
- pShuttle-CMV-lacZ Control Vector: Not applicable.

**Lower and upper explosive (flammable) limits**
- Adenoviral pCTAP Shuttle Vector - A: Not available.
- Adenoviral pCTAP Shuttle Vector - B: Not available.
- pCTAP Shuttle vector-C: Not available.
- Adenoviral pTAP Shuttle-CAT Vector: Not available.
- pShuttle-CMV-lacZ Control Vector: Not available.
## Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Adenoviral pCTAP Shuttle Vector - A</th>
<th>Adenoviral pCTAP Shuttle Vector - B</th>
<th>pCTAP Shuttle vector-C</th>
<th>Adenoviral pTAP Shuttle-CAT Vector</th>
<th>pShuttle-CMV-lacZ Control Vector</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Adenoviral pCTAP Shuttle Vector - A</td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>pCTAP Shuttle vector-C</td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>pShuttle-CMV-lacZ Control Vector</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Adenoviral pCTAP Shuttle Vector - A</td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>pCTAP Shuttle vector-C</td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>pShuttle-CMV-lacZ Control Vector</td>
</tr>
<tr>
<td><strong>Solubility</strong></td>
<td>Adenoviral pCTAP Shuttle Vector - A</td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>pCTAP Shuttle vector-C</td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>pShuttle-CMV-lacZ Control Vector</td>
</tr>
<tr>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>Adenoviral pCTAP Shuttle Vector - A</td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>pCTAP Shuttle vector-C</td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>pShuttle-CMV-lacZ Control Vector</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Adenoviral pCTAP Shuttle Vector - A</td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>pCTAP Shuttle vector-C</td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>pShuttle-CMV-lacZ Control Vector</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Adenoviral pCTAP Shuttle Vector - A</td>
<td>Adenoviral pCTAP Shuttle Vector - B</td>
<td>pCTAP Shuttle vector-C</td>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>pShuttle-CMV-lacZ Control Vector</td>
</tr>
</tbody>
</table>

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## Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Viscosity</th>
<th>pShuttle-CMV-lacZ Control Vector</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenoviral pCTAP Shuttle Vector -A</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Adenoviral pCTAP Shuttle Vector -B</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>pCTAP Shuttle vector-C</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Adenoviral pTAP Shuttle-CAT Vector</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>pShuttle-CMV-lacZ Control Vector</td>
<td>Not available.</td>
<td></td>
</tr>
</tbody>
</table>

## Section 10. Stability and reactivity

### 10.1 Reactivity

| Adenoviral pCTAP Shuttle Vector -A | No specific test data related to reactivity available for this product or its ingredients. |
| Adenoviral pCTAP Shuttle Vector -B | No specific test data related to reactivity available for this product or its ingredients. |
| pCTAP Shuttle vector-C            | No specific test data related to reactivity available for this product or its ingredients. |
| Adenoviral pTAP Shuttle-CAT Vector| No specific test data related to reactivity available for this product or its ingredients. |
| pShuttle-CMV-lacZ Control Vector  | No specific test data related to reactivity available for this product or its ingredients. |

### 10.2 Chemical stability

| Adenoviral pCTAP Shuttle Vector -A | The product is stable. |
| Adenoviral pCTAP Shuttle Vector -B | The product is stable. |
| pCTAP Shuttle vector-C            | The product is stable. |
| Adenoviral pTAP Shuttle-CAT Vector| The product is stable. |
| pShuttle-CMV-lacZ Control Vector  | The product is stable. |

### 10.3 Possibility of hazardous reactions

| Adenoviral pCTAP Shuttle Vector -A | Under normal conditions of storage and use, hazardous reactions will not occur. |
| Adenoviral pCTAP Shuttle Vector -B | Under normal conditions of storage and use, hazardous reactions will not occur. |
| pCTAP Shuttle vector-C            | Under normal conditions of storage and use, hazardous reactions will not occur. |
| Adenoviral pTAP Shuttle-CAT Vector| Under normal conditions of storage and use, hazardous reactions will not occur. |
| pShuttle-CMV-lacZ Control Vector  | Under normal conditions of storage and use, hazardous reactions will not occur. |

### 10.4 Conditions to avoid

| Adenoviral pCTAP Shuttle Vector -A | No specific data. |
| Adenoviral pCTAP Shuttle Vector -B | No specific data. |
| pCTAP Shuttle vector-C            | No specific data. |
| Adenoviral pTAP Shuttle-CAT Vector| No specific data. |
| pShuttle-CMV-lacZ Control Vector  | No specific data. |
## Section 10. Stability and reactivity

### 10.5 Incompatible materials

- Adenoviral pCTAP Shuttle Vector - A
- Adenoviral pCTAP Shuttle Vector - B
- pCTAP Shuttle vector-C
- Adenoviral pTAP Shuttle-CAT Vector
- pShuttle-CMV-lacZ Control Vector

May react or be incompatible with oxidizing materials.

### 10.6 Hazardous decomposition products

- Adenoviral pCTAP Shuttle Vector - A
- Adenoviral pCTAP Shuttle Vector - B
- pCTAP Shuttle vector-C
- Adenoviral pTAP Shuttle-CAT Vector
- pShuttle-CMV-lacZ Control Vector

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**
- Not available.

**Irritation/Corrosion**
- Not available.

**Sensitization**
- Not available.

**Mutagenicity**
- Not available.

**Carcinogenicity**
- Not available.

**Reproductive toxicity**
- Not available.

**Teratogenicity**
- Not available.

**Specific target organ toxicity (single exposure)**
- Not available.

**Specific target organ toxicity (repeated exposure)**
- Not available.

**Aspiration hazard**

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Section 11. Toxicological information

Not available.

Information on the likely routes of exposure

Inhalation:
- Adenoviral pCTAP Shuttle Vector - A: Not available.
- Adenoviral pCTAP Shuttle Vector - B: Not available.
- pCTAP Shuttle vector-C: Not available.
- Adenoviral pTAP Shuttle-CAT Vector: Not available.
- pShuttle-CMV-lacZ Control Vector: Not available.

Potential acute health effects

Eye contact:
- Adenoviral pCTAP Shuttle Vector - A: No known significant effects or critical hazards.
- Adenoviral pCTAP Shuttle Vector - B: No known significant effects or critical hazards.
- pCTAP Shuttle vector-C: No known significant effects or critical hazards.
- Adenoviral pTAP Shuttle-CAT Vector: No known significant effects or critical hazards.
- pShuttle-CMV-lacZ Control Vector: No known significant effects or critical hazards.

Inhalation:
- Adenoviral pCTAP Shuttle Vector - A: No known significant effects or critical hazards.
- Adenoviral pCTAP Shuttle Vector - B: No known significant effects or critical hazards.
- pCTAP Shuttle vector-C: No known significant effects or critical hazards.
- Adenoviral pTAP Shuttle-CAT Vector: No known significant effects or critical hazards.
- pShuttle-CMV-lacZ Control Vector: No known significant effects or critical hazards.

Skin contact:
- Adenoviral pCTAP Shuttle Vector - A: No known significant effects or critical hazards.
- Adenoviral pCTAP Shuttle Vector - B: No known significant effects or critical hazards.
- pCTAP Shuttle vector-C: No known significant effects or critical hazards.
- Adenoviral pTAP Shuttle-CAT Vector: No known significant effects or critical hazards.
- pShuttle-CMV-lacZ Control Vector: No known significant effects or critical hazards.

Ingestion:
- Adenoviral pCTAP Shuttle Vector - A: No known significant effects or critical hazards.
- Adenoviral pCTAP Shuttle Vector - B: No known significant effects or critical hazards.
- pCTAP Shuttle vector-C: No known significant effects or critical hazards.
- Adenoviral pTAP Shuttle-CAT Vector: No known significant effects or critical hazards.
- pShuttle-CMV-lacZ Control Vector: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:
- Adenoviral pCTAP Shuttle Vector - A: No specific data.
- Adenoviral pCTAP Shuttle Vector - B: No specific data.
- pCTAP Shuttle vector-C: No specific data.
- Adenoviral pTAP Shuttle-CAT Vector: No specific data.
- pShuttle-CMV-lacZ Control Vector: No specific data.

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## Section 11. Toxicological information

| Inhalation | Adenoviral pCTAP Shuttle Vector - A | No specific data. |
| Adenoviral pCTAP Shuttle Vector - B | No specific data. |
| pCTAP Shuttle vector-C | No specific data. |
| Adenoviral pTAP Shuttle-CAT Vector | No specific data. |
| pShuttle-CMV-lacZ Control Vector | No specific data. |

| Skin contact | Adenoviral pCTAP Shuttle Vector - A | No specific data. |
| Adenoviral pCTAP Shuttle Vector - B | No specific data. |
| pCTAP Shuttle vector-C | No specific data. |
| Adenoviral pTAP Shuttle-CAT Vector | No specific data. |
| pShuttle-CMV-lacZ Control Vector | No specific data. |

| Ingestion | Adenoviral pCTAP Shuttle Vector - A | No specific data. |
| Adenoviral pCTAP Shuttle Vector - B | No specific data. |
| pCTAP Shuttle vector-C | No specific data. |
| Adenoviral pTAP Shuttle-CAT Vector | No specific data. |
| pShuttle-CMV-lacZ Control Vector | No specific data. |

**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**: Adenoviral pCTAP Shuttle Vector - A | No known significant effects or critical hazards.
  Adenoviral pCTAP Shuttle Vector - B | No known significant effects or critical hazards.
  pCTAP Shuttle vector-C | No known significant effects or critical hazards.
  Adenoviral pTAP Shuttle-CAT Vector | No known significant effects or critical hazards.
  pShuttle-CMV-lacZ Control Vector | No known significant effects or critical hazards.

- **Carcinogenicity**: Adenoviral pCTAP Shuttle Vector - A | No known significant effects or critical hazards.
  Adenoviral pCTAP Shuttle Vector - B | No known significant effects or critical hazards.
  pCTAP Shuttle vector-C | No known significant effects or critical hazards.
  Adenoviral pTAP Shuttle-CAT Vector | No known significant effects or critical hazards.
  pShuttle-CMV-lacZ Control Vector | No known significant effects or critical hazards.
Section 11. Toxicological information

**Mutagenicity**
- Adenoviral pCTAP Shuttle Vector - A: No known significant effects or critical hazards.
- Adenoviral pCTAP Shuttle Vector - B: No known significant effects or critical hazards.
- pCTAP Shuttle vector-C: No known significant effects or critical hazards.
- Adenoviral pTAP Shuttle-CAT Vector: No known significant effects or critical hazards.
- pShuttle-CMV-lacZ Control Vector: No known significant effects or critical hazards.

**Teratogenicity**
- Adenoviral pCTAP Shuttle Vector - A: No known significant effects or critical hazards.
- Adenoviral pCTAP Shuttle Vector - B: No known significant effects or critical hazards.
- pCTAP Shuttle vector-C: No known significant effects or critical hazards.
- Adenoviral pTAP Shuttle-CAT Vector: No known significant effects or critical hazards.
- pShuttle-CMV-lacZ Control Vector: No known significant effects or critical hazards.

**Developmental effects**
- Adenoviral pCTAP Shuttle Vector - A: No known significant effects or critical hazards.
- Adenoviral pCTAP Shuttle Vector - B: No known significant effects or critical hazards.
- pCTAP Shuttle vector-C: No known significant effects or critical hazards.
- Adenoviral pTAP Shuttle-CAT Vector: No known significant effects or critical hazards.
- pShuttle-CMV-lacZ Control Vector: No known significant effects or critical hazards.

**Fertility effects**
- Adenoviral pCTAP Shuttle Vector - A: No known significant effects or critical hazards.
- Adenoviral pCTAP Shuttle Vector - B: No known significant effects or critical hazards.
- pCTAP Shuttle vector-C: No known significant effects or critical hazards.
- Adenoviral pTAP Shuttle-CAT Vector: No known significant effects or critical hazards.
- pShuttle-CMV-lacZ Control Vector: No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**
- Not available.

Section 12. Ecological information

**12.1 Toxicity**
- Not available.

**12.2 Persistence and degradability**
- Not available.

**12.3 Bioaccumulative potential**
- Not available.

**12.4 Mobility in soil**
- **Soil/water partition coefficient (K_{oc})**: Not available.

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

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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

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

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

Section 14. Transport information

Regulatory information

DOT / IMDG / IATA: Not regulated.

Section 15. Regulatory information

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

U.S. Federal regulations

Clean Water Act (CWA) 311: Edetic acid

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

Clean Air Act Section 602 Class I Substances: Not listed

Clean Air Act Section 602 Class II Substances: Not listed

DEA List I Chemicals (Precursor Chemicals): Not listed

DEA List II Chemicals (Essential Chemicals): Not listed

SARA 302/304: No products were found.

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Section 15. Regulatory information

**SARA 304 RQ**
- Not applicable.

**SARA 311/312**
- Classification: Not applicable.

**Composition/information on ingredients**
- No products were found.

**State regulations**
- **Massachusetts**: None of the components are listed.
- **New York**: None of the components are listed.
- **New Jersey**: None of the components are listed.
- **Pennsylvania**: None of the components are listed.
- **California Prop. 65**: No products were found.

**International regulations**
- **Chemical Weapon Convention List Schedules I, II & III Chemicals**
  - Not listed.

- **Montreal Protocol (Annexes A, B, C, E)**
  - Not listed.

- **Stockholm Convention on Persistent Organic Pollutants**
  - Not listed.

- **Rotterdam Convention on Prior Informed Consent (PIC)**
  - Not listed.

- **UNECE Aarhus Protocol on POPs and Heavy Metals**
  - Not listed.

**Inventory list**
- **Australia**: All components are listed or exempted.
- **Canada inventory**: All components are listed or exempted.
- **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.
- **Malaysia**: Not determined.
- **New Zealand**: All components are listed or exempted.
- **Philippines**: All components are listed or exempted.
- **Republic of Korea**: All components are listed or exempted.
- **Taiwan**: All components are listed or exempted.
- **Turkey**: Not determined.

**Date of issue**: 03/30/2017
Section 16. Other information

History

- Date of issue : 03/30/2017
- Date of previous issue : 02/27/2015.
- Version : 4

Indicates information that has changed from previously issued version.

Notice to reader

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