SAFETY DATA SHEET

PathDetect SRF cis Reporting System, Part Number 219081

Section 1. Identification

Product identifier : PathDetect SRF cis Reporting System, Part Number 219081
Part No. (Chemical Kit) : 219081
Part No. : pSRF-Luc Vector 219082-51
               pFC-PKA Plasmid 219070-51

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

Analytical reagent.

pSRF-Luc Vector 0.05 mL (50 µg 1 µg/µl)
pFC-PKA Plasmid 0.2 mL

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

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

Section 2. Hazard(s) identification

Classification of the substance or mixture
Not classified.

GHS label elements

Signal word : pSRF-Luc Vector No signal word.
pFC-PKA Plasmid No signal word.

Hazard statements : pSRF-Luc Vector No known significant effects or critical hazards.
pFC-PKA Plasmid No known significant effects or critical hazards.

Precautionary statements

Prevention : pSRF-Luc Vector Not applicable.
pFC-PKA Plasmid Not applicable.

Response : pSRF-Luc Vector Not applicable.
pFC-PKA Plasmid Not applicable.

Storage : pSRF-Luc Vector Not applicable.
pFC-PKA Plasmid Not applicable.

Disposal : pSRF-Luc Vector Not applicable.
pFC-PKA Plasmid Not applicable.

Supplemental label elements

Other hazards which do not result in classification : pSRF-Luc Vector None known.
pFC-PKA Plasmid None known.

Date of issue/Date of revision : 30/09/2016
Date of previous issue : 23/04/2013
Version : 4
Section 3. Composition and ingredient information

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>CAS number/other identifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pSRF-Luc Vector</strong> Mixture</td>
<td></td>
</tr>
<tr>
<td><strong>pFC-PKA Plasmid</strong> Mixture</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Eye contact</th>
<th><strong>pSRF-Luc Vector</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pFC-PKA Plasmid</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td><strong>pSRF-Luc Vector</strong></td>
</tr>
<tr>
<td></td>
<td>pFC-PKA Plasmid</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td><strong>pSRF-Luc Vector</strong></td>
</tr>
<tr>
<td></td>
<td>pFC-PKA Plasmid</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td><strong>pSRF-Luc Vector</strong></td>
</tr>
<tr>
<td></td>
<td>pFC-PKA Plasmid</td>
</tr>
</tbody>
</table>

Most important symptoms/effects, acute and delayed

Potential acute health effects

<table>
<thead>
<tr>
<th>Eye contact</th>
<th><strong>pSRF-Luc Vector</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pFC-PKA Plasmid</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td><strong>pSRF-Luc Vector</strong></td>
</tr>
<tr>
<td></td>
<td>pFC-PKA Plasmid</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td><strong>pSRF-Luc Vector</strong></td>
</tr>
<tr>
<td></td>
<td>pFC-PKA Plasmid</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td><strong>pSRF-Luc Vector</strong></td>
</tr>
<tr>
<td></td>
<td>pFC-PKA Plasmid</td>
</tr>
</tbody>
</table>

Over-exposure signs/symptoms

Date of issue/Date of revision: 30/09/2016  Date of previous issue: 23/04/2013  Version: 4 2/11
Section 4. First aid measures

Eye contact : pSRF-Luc Vector  No specific data.
pFC-PKA Plasmid  No specific data.

Inhalation : pSRF-Luc Vector  No specific data.
pFC-PKA Plasmid  No specific data.

Skin contact : pSRF-Luc Vector  No specific data.
pFC-PKA Plasmid  No specific data.

Ingestion : pSRF-Luc Vector  No specific data.
pFC-PKA Plasmid  No specific data.

Notes to physician:
- pSRF-Luc Vector: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- pFC-PKA Plasmid: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments:
pFC-PKA Plasmid: No specific treatment.

Protection of first-aiders:
- pSRF-Luc Vector: No action shall be taken involving any personal risk or without suitable training.
pFC-PKA Plasmid: No action shall be taken involving any personal risk or without suitable training.

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

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media: pSRF-Luc Vector  Use an extinguishing agent suitable for the surrounding fire.
pFC-PKA Plasmid  Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: pSRF-Luc Vector  None known.
pFC-PKA Plasmid  None known.

Specific hazards arising from the chemical:
- pSRF-Luc Vector: In a fire or if heated, a pressure increase will occur and the container may burst.
pFC-PKA Plasmid: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products: pSRF-Luc Vector  No specific data.
pFC-PKA Plasmid  No specific data.

Special protective actions for fire-fighters:
- pSRF-Luc 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.
pFC-PKA Plasmid: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters:
- pSRF-Luc Vector: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
pFC-PKA Plasmid: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:
- pSRF-Luc 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 spilt material. Put on appropriate personal protective equipment.
- pFC-PKA Plasmid
  - No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

For emergency responders:
- pSRF-Luc Vector
  - If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- pFC-PKA Plasmid
  - If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions:
- pSRF-Luc Vector
  - Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- pFC-PKA Plasmid
  - Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

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

Section 7. Handling and storage

Precautions for safe handling

Protective measures:
- pSRF-Luc Vector
  - Put on appropriate personal protective equipment (see Section 8).
- pFC-PKA Plasmid
  - Put on appropriate personal protective equipment (see Section 8).
Section 7. Handling and storage

Advice on general occupational hygiene

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.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls and 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.
Section 8. Exposure controls and personal protection

**Skin protection**

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

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

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

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

Section 9. Physical and chemical properties

**Appearance**

**Physical state**: pSRF-Luc Vector Liquid. pFC-PKA Plasmid Liquid.

**Colour**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.

**Odour**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.

**Odour threshold**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.

**pH**: pSRF-Luc Vector 7.5 pFC-PKA Plasmid 7.5

**Melting point**: pSRF-Luc Vector 0°C (32°F) pFC-PKA Plasmid 0°C (32°F)

**Boiling point**: pSRF-Luc Vector 100°C (212°F) pFC-PKA Plasmid 100°C (212°F)

**Flash point**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.

**Evaporation rate**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.

**Flammability (solid, gas)**: pSRF-Luc Vector Not applicable. pFC-PKA Plasmid Not applicable.

**Lower and upper explosive (flammable) limits**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.

**Vapour pressure**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.

**Vapour density**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.

**Relative density**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.

**Solubility**: pSRF-Luc Vector Easily soluble in the following materials: cold water and hot water. pFC-PKA Plasmid Easily soluble in the following materials: cold water and hot water.

**Partition coefficient: n-octanol/water**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.

**Auto-ignition temperature**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.

**Decomposition temperature**: pSRF-Luc Vector Not available. pFC-PKA Plasmid Not available.
Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>pSRF-Luc Vector</th>
<th>pFC-PKA Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>pSRF-Luc Vector</th>
<th>pFC-PKA Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>The product is stable.</td>
<td>The product is stable.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>May react or be incompatible with oxidising materials.</td>
<td>May react or be incompatible with oxidising materials.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
</tbody>
</table>

Section 11. Toxicological information

Information on toxicological effects

**Acute toxicity**
Not available.

**Irritation/Corrosion**
Not available.

**Sensitisation**
Not available.

**Mutagenicity**
Not available.

**Carcinogenicity**
Not available.

**Reproductive toxicity**
Not available.

**Teratogenicity**
Not available.

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

**Specific target organ toxicity (repeated exposure)**
Not available.
Section 11. Toxicological information

Aspiration hazard
Not available.

Information on likely routes of exposure:
<table>
<thead>
<tr>
<th>Route</th>
<th>pSRF-Luc Vector</th>
<th>pFC-PKA Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Potential acute health effects

Symptoms related to the physical, chemical and toxicological characteristics:
<table>
<thead>
<tr>
<th>Route</th>
<th>pSRF-Luc Vector</th>
<th>pFC-PKA Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure:
| Potential immediate effects | Not available. |
| Potential delayed effects   | Not available. |

Long term exposure:
| Potential immediate effects | Not available. |
| Potential delayed effects   | Not available. |

Potential chronic health effects:
Not available.

<table>
<thead>
<tr>
<th>Category</th>
<th>pSRF-Luc Vector</th>
<th>pFC-PKA Plasmid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenicity</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Developmental effects</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Fertility effects</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Numerical measures of toxicity

Acute toxicity estimates:
Not available.
Section 11. Toxicological information

Bioaccumulative potential
No known significant effects or critical hazards.

Persistence and degradability
Not available.

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

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

Section 14. Transport information

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

Section 15. Regulatory information

Not regulated.

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

Not regulated as Dangerous Goods according to the ADG Code.

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.

Not available.
Section 15. Regulatory information

Not listed.

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

Stockholm Convention on Persistent Organic Pollutants
Not listed.

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

UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.

International lists

National inventory

Canada : 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): Not determined.
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.
United States : All components are listed or exempted.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 30/09/2016
Date of previous issue : 23/04/2013.
Version : 4

Key to abbreviations

ADG = Australian Dangerous Goods
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
NOHSC = National Occupational Health and Safety Commission
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified.</td>
<td></td>
</tr>
</tbody>
</table>

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

Date of issue/Date of revision : 30/09/2016
Date of previous issue : 23/04/2013.
Version : 4

10/11
Section 16. Any other relevant information

Disclaimer: The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.