SAFETY DATA SHEET
Kappa- Lambda mRNA CISH (Dako Omnis), Part Number G111700-2

Section 1. Identification

Product identifier : Kappa- Lambda mRNA CISH (Dako Omnis), Part Number G111700-2
Part No. (Chemical Kit) : G111700-2
Part No. : Kappa mRNA CISH (Dako Omnis) G111700-85510
Lambda mRNA CISH (Dako Omnis) G111703-85510

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

For in vitro diagnostic use
Kappa mRNA CISH (Dako Omnis) 2.0 ml
Lambda mRNA CISH (Dako Omnis) 2.0 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
Kappa mRNA CISH (Dako Omnis)
H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

Lambda mRNA CISH (Dako Omnis)
H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

GHS label elements
Hazard pictograms : Kappa mRNA CISH (Dako Omnis)
Lambda mRNA CISH (Dako Omnis)

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Date of previous issue : 31/05/2017
Version : 1.1
Section 2. Hazard(s) identification

Signal word:
- Kappa mRNA CISH (Dako Omnis) - WARNING
- Lambda mRNA CISH (Dako Omnis) - WARNING

Hazard statements:
- Kappa mRNA CISH (Dako Omnis) - H319 - Causes serious eye irritation.
- Lambda mRNA CISH (Dako Omnis) - H319 - Causes serious eye irritation.

Precautionary statements:

Prevention:
- Kappa mRNA CISH (Dako Omnis)
  - P280 - Wear eye or face protection.
  - P264 - Wash hands thoroughly after handling.
- Lambda mRNA CISH (Dako Omnis)
  - P280 - Wear eye or face protection.
  - P264 - Wash hands thoroughly after handling.

Response:
- Kappa mRNA CISH (Dako Omnis)
  - P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P337 + P313 - If eye irritation persists: Get medical attention.
- Lambda mRNA CISH (Dako Omnis)
  - P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P337 + P313 - If eye irritation persists: Get medical attention.

Storage:
- Kappa mRNA CISH (Dako Omnis) - Not applicable.
- Lambda mRNA CISH (Dako Omnis) - Not applicable.

Disposal:
- Kappa mRNA CISH (Dako Omnis) - Not applicable.
- Lambda mRNA CISH (Dako Omnis) - Not applicable.

Supplemental label elements:
- Kappa mRNA CISH (Dako Omnis) - Not applicable.
- Lambda mRNA CISH (Dako Omnis) - Not applicable.

Other hazards which do not result in classification:
- Kappa mRNA CISH (Dako Omnis) - None known.
- Lambda mRNA CISH (Dako Omnis) - None known.

Section 3. Composition and ingredient information

Substance/mixture:
- Kappa mRNA CISH (Dako Omnis) - Mixture
- Lambda mRNA CISH (Dako Omnis) - Mixture

CAS number/other identifiers

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kappa mRNA CISH (Dako Omnis)</td>
<td>≥10 - ≤30</td>
<td>96-49-1</td>
</tr>
<tr>
<td>ethylene carbonate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td>≥10 - ≤30</td>
<td>96-49-1</td>
</tr>
<tr>
<td>ethylene carbonate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 3. Composition and ingredient information

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

<table>
<thead>
<tr>
<th>Description of necessary first aid measures</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>Lambda mRNA CISH (Dako Omnis)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.</td>
<td></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</td>
<td></td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.</td>
<td></td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</td>
<td></td>
</tr>
</tbody>
</table>
# Section 4. First aid measures

<table>
<thead>
<tr>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>Lambda mRNA CISH (Dako Omnis)</th>
</tr>
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<tbody>
<tr>
<td>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</td>
<td></td>
</tr>
</tbody>
</table>

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

### Potential acute health effects

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>Causes serious eye irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingestion</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

### Over-exposure signs/symptoms

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>Adverse symptoms may include the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td>pain or irritation, watering, redness</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingestion</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

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

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**Version**: 1.1
Section 4. First aid measures

Notes to physician:

Kappa mRNA CISH (Dako Omnis)

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Lambda mRNA CISH (Dako Omnis)

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Protection of first-aiders:

Kappa mRNA CISH (Dako Omnis)

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Lambda mRNA CISH (Dako Omnis)

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Specific treatments:

Kappa mRNA CISH (Dako Omnis)

No specific treatment.

Lambda mRNA CISH (Dako Omnis)

No specific treatment.

Notes to physician:

Kappa mRNA CISH (Dako Omnis)

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Lambda mRNA CISH (Dako Omnis)

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Protection of first-aiders:

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No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Lambda mRNA CISH (Dako Omnis)

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Specific treatments:

Kappa mRNA CISH (Dako Omnis)

No specific treatment.

Lambda mRNA CISH (Dako Omnis)

No specific treatment.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media:

Kappa mRNA CISH (Dako Omnis)

Use an extinguishing agent suitable for the surrounding fire.

Lambda mRNA CISH (Dako Omnis)

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:

Kappa mRNA CISH (Dako Omnis)

None known.

Lambda mRNA CISH (Dako Omnis)

None known.

Specific hazards arising from the chemical:

Kappa mRNA CISH (Dako Omnis)

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

Lambda mRNA CISH (Dako Omnis)

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

Hazardous thermal decomposition products:

Kappa mRNA CISH (Dako Omnis)

Decomposition products may include the following materials:

- carbon dioxide
- carbon monoxide
- sulfur oxides
- halogenated compounds
- metal oxide/oxides

Lambda mRNA CISH (Dako Omnis)

Decomposition products may include the following materials:

- carbon dioxide
- carbon monoxide
- sulfur oxides
- halogenated compounds
- metal oxide/oxides

Special protective actions for fire-fighters:

Kappa mRNA CISH (Dako Omnis)

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.

Lambda mRNA CISH (Dako Omnis)

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. Firefighting measures

<table>
<thead>
<tr>
<th>Special protective equipment for fire-fighters</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>Lambda mRNA CISH (Dako Omnis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</td>
<td>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</td>
<td></td>
</tr>
</tbody>
</table>

### Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

<table>
<thead>
<tr>
<th>For non-emergency personnel</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>Lambda mRNA CISH (Dako Omnis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.</td>
<td>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For emergency responders</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>Lambda mRNA CISH (Dako Omnis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 &quot;For non-emergency personnel&quot;.</td>
<td>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 &quot;For non-emergency personnel&quot;.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental precautions</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>Lambda mRNA CISH (Dako Omnis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>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).</td>
<td>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).</td>
<td></td>
</tr>
</tbody>
</table>

#### Methods and material for containment and cleaning up

<table>
<thead>
<tr>
<th>Methods for cleaning up</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>Lambda mRNA CISH (Dako Omnis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

Date of issue/Date of revision: 10/09/2017  
Date of previous issue: 31/05/2017  
Version: 1.1  
6/15
### Precautions for safe handling

#### Protective measures
- **Kappa mRNA CISH (Dako Omnis)**
  - Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

- **Lambda mRNA CISH (Dako Omnis)**
  - Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### Advice on general occupational hygiene
- **Kappa mRNA CISH (Dako Omnis)**
  - 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.

- **Lambda mRNA CISH (Dako Omnis)**
  - 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
- **Kappa mRNA CISH (Dako Omnis)**
  - 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. See Section 10 for incompatible materials before handling or use.

- **Lambda mRNA CISH (Dako Omnis)**
  - 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. See Section 10 for incompatible materials before handling or use.
Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits
None.

Appropriate engineering controls

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

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

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

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

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

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

Section 9. Physical and chemical properties

Appearance

Physical state: Kappa mRNA CISH (Dako Omnis) Liquid.
Lambda mRNA CISH (Dako Omnis) Liquid.

Colour: Kappa mRNA CISH (Dako Omnis) Not available.
Lambda mRNA CISH (Dako Omnis) Not available.

Odour: Kappa mRNA CISH (Dako Omnis) Not available.
Lambda mRNA CISH (Dako Omnis) Not available.
### Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>Lambda mRNA CISH (Dako Omnis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour threshold</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>6.2</td>
<td>6.2</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in the following materials: cold water and hot water.</td>
<td>Soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Date of issue/Date of revision**: 10/09/2017  
**Date of previous issue**: 31/05/2017  
**Version**: 1.1
Section 9. Physical and chemical properties

**Decomposition temperature**
- Kappa mRNA CISH (Dako Omnis): Not available.
- Lambda mRNA CISH (Dako Omnis): Not available.

**Viscosity**
- Kappa mRNA CISH (Dako Omnis): Not available.
- Lambda mRNA CISH (Dako Omnis): Not available.

Section 10. Stability and reactivity

**Reactivity**
- Kappa mRNA CISH (Dako Omnis): No specific test data related to reactivity available for this product or its ingredients.
- Lambda mRNA CISH (Dako Omnis): No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability**
- Kappa mRNA CISH (Dako Omnis): The product is stable.
- Lambda mRNA CISH (Dako Omnis): The product is stable.

**Possibility of hazardous reactions**
- Kappa mRNA CISH (Dako Omnis): Under normal conditions of storage and use, hazardous reactions will not occur.
- Lambda mRNA CISH (Dako Omnis): Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid**
- Kappa mRNA CISH (Dako Omnis): No specific data.
- Lambda mRNA CISH (Dako Omnis): No specific data.

**Incompatible materials**
- Kappa mRNA CISH (Dako Omnis): May react or be incompatible with oxidising materials.
- Lambda mRNA CISH (Dako Omnis): May react or be incompatible with oxidising materials.

**Hazardous decomposition products**
- Kappa mRNA CISH (Dako Omnis): Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Lambda mRNA CISH (Dako Omnis): Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

**Information on toxicological effects**

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kappa mRNA CISH (Dako Omnis) ethylene carbonate</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>10 g/kg</td>
<td>-</td>
</tr>
<tr>
<td>Lambda mRNA CISH (Dako Omnis) ethylene carbonate</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>10 g/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

**Irritation/Corrosion**

Date of issue/Date of revision: 10/09/2017  Date of previous issue: 31/05/2017  Version: 1.1  10/15
Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kappa mRNA CISH (Dako Omnis) ethylene carbonate</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>660 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Lambda mRNA CISH (Dako Omnis) ethylene carbonate</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>660 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitisation
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

Information on likely routes of exposure:
Kappa mRNA CISH (Dako Omnis)
Routes of entry anticipated: Oral, Dermal, Inhalation.
Lambda mRNA CISH (Dako Omnis)
Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects:

Eye contact:
Kappa mRNA CISH (Dako Omnis)
Causes serious eye irritation.
Lambda mRNA CISH (Dako Omnis)
Causes serious eye irritation.

Inhalation:
Kappa mRNA CISH (Dako Omnis)
No known significant effects or critical hazards.
Lambda mRNA CISH (Dako Omnis)
No known significant effects or critical hazards.

Skin contact:
Kappa mRNA CISH (Dako Omnis)
No known significant effects or critical hazards.
Lambda mRNA CISH (Dako Omnis)
No known significant effects or critical hazards.

Ingestion:
Kappa mRNA CISH (Dako Omnis)
No known significant effects or critical hazards.
Lambda mRNA CISH (Dako Omnis)
No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics
## Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Kappa mRNA CISH (Dako Omnis)</th>
<th>Adverse symptoms may include the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td>Adverse symptoms may include the following:</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Kappa mRNA CISH (Dako Omnis)</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td></td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>Kappa mRNA CISH (Dako Omnis)</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td></td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Kappa mRNA CISH (Dako Omnis)</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Lambda mRNA CISH (Dako Omnis)</td>
<td></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.

### General

- Kappa mRNA CISH (Dako Omnis) No known significant effects or critical hazards.
- Lambda mRNA CISH (Dako Omnis) No known significant effects or critical hazards.

### Carcinogenicity

- Kappa mRNA CISH (Dako Omnis) No known significant effects or critical hazards.
- Lambda mRNA CISH (Dako Omnis) No known significant effects or critical hazards.

### Mutagenicity

- Kappa mRNA CISH (Dako Omnis) No known significant effects or critical hazards.
- Lambda mRNA CISH (Dako Omnis) No known significant effects or critical hazards.

### Teratogenicity

- Kappa mRNA CISH (Dako Omnis) No known significant effects or critical hazards.
- Lambda mRNA CISH (Dako Omnis) No known significant effects or critical hazards.

### Developmental effects

- Kappa mRNA CISH (Dako Omnis) No known significant effects or critical hazards.
- Lambda mRNA CISH (Dako Omnis) No known significant effects or critical hazards.

### Fertility effects

- Kappa mRNA CISH (Dako Omnis) No known significant effects or critical hazards.
- Lambda mRNA CISH (Dako Omnis) No known significant effects or critical hazards.

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**Date of previous issue**: 31/05/2017  
**Version**: 1.1  
**Date of previous issue**: 31/05/2017
Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates
Not available.

Section 12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kappa mRNA CISH (Dako Omnis) ethylene carbonate</td>
<td>Acute LC50 53000 mg/l Fresh water</td>
<td>Fish - Fry</td>
<td>96 hours</td>
</tr>
<tr>
<td>Lambda mRNA CISH (Dako Omnis) ethylene carbonate</td>
<td>Acute LC50 53000 mg/l Fresh water</td>
<td>Fish - Fry</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kappa mRNA CISH (Dako Omnis) ethylene carbonate</td>
<td>0.11</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Lambda mRNA CISH (Dako Omnis) ethylene carbonate</td>
<td>0.11</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

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 minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
Section 14. Transport information

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

**Special precautions for user**: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of Marpol and the IBC Code**: Not available.

Section 15. Regulatory information

**Standard Uniform Schedule of Medicine and Poisons**
5

**Model Work Health and Safety Regulations - Scheduled Substances**
No listed substance

**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** : Not determined.
**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): Not determined. Japan inventory (ISHL): All components are listed or exempted.
**Malaysia** : Not determined.
**New Zealand** : All components are listed or exempted.
**Philippines** : Not determined.
**Republic of Korea** : Not determined.
**Taiwan** : All components are listed or exempted.
**Thailand** : Not determined.
**Turkey** : Not determined.
**United States** : All components are listed or exempted.
**Viet Nam** : Not determined.
### Section 16. Any other relevant information

#### History

<table>
<thead>
<tr>
<th>Date of issue/Date of revision</th>
<th>10/09/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of previous issue</td>
<td>31/05/2017</td>
</tr>
<tr>
<td>Version</td>
<td>1.1</td>
</tr>
</tbody>
</table>

#### Key to abbreviations

- **ADG** = Australian Dangerous Goods
- **ATE** = Acute Toxicity Estimate
- **BCF** = Bioconcentration Factor
- **GHS** = Globally Harmonized System of Classification and Labelling of Chemicals
- **IATA** = International Air Transport Association
- **IBC** = Intermediate Bulk Container
- **IMDG** = International Maritime Dangerous Goods
- **LogPow** = logarithm of the octanol/water partition coefficient
- **MARPOL** = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- **NOHSC** = National Occupational Health and Safety Commission
- **SUSMP** = Standard Uniform Schedule of Medicine and Poisons
- **UN** = United Nations

#### Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
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<tbody>
<tr>
<td>Kappa mRNA CISH (Dako Omnis)</td>
<td></td>
</tr>
<tr>
<td>Eye Irrit. 2A, H319</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Lambda mRNA CISH (Dako Omnis)</td>
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</tr>
<tr>
<td>Eye Irrit. 2A, H319</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

#### References

- Not available.

> Indicates information that has changed from previously issued version.

#### Notice to reader

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