

SAFETY DATA SHEET

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

Section 1. Identification

1.1 Product identifier

Product name : 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
Validation date : 9/10/2017

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

Material uses : For in vitro diagnostic use
 Kappa mRNA CISH (Dako Omnis) 2.0 ml
 Lambda mRNA CISH (Dako Omnis) 2.0 ml

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 : Kappa mRNA CISH (Dako Omnis) This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 Lambda mRNA CISH (Dako Omnis) This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Kappa mRNA CISH (Dako Omnis)
 H319 EYE IRRITATION - Category 2A

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

Ingredients of unknown toxicity : Kappa mRNA CISH (Dako Omnis) Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 10 - 30%
 Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30%
 Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
 Lambda mRNA CISH (Dako Omnis) Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 10 - 30%
 Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30%
 Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%

Section 2. Hazards identification

2.2 GHS label elements

Hazard pictograms

: Kappa mRNA CISH (Dako Omnis) 



Lambda mRNA CISH (Dako Omnis)



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.

Response

: Kappa mRNA CISH (Dako Omnis) P264 - Wash hands thoroughly after handling.
 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) None known.
 Lambda mRNA CISH (Dako Omnis) None known.

2.3 Other hazards

Hazards not otherwise classified

: Kappa mRNA CISH (Dako Omnis) None known.
 Lambda mRNA CISH (Dako Omnis) None known.

Section 3. Composition/information on ingredients

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

Ingredient name	%	CAS number
Kappa mRNA CISH (Dako Omnis) ethylene carbonate Sodium chloride	≥10 - ≤25 ≤5	96-49-1 7647-14-5
Lambda mRNA CISH (Dako Omnis) ethylene carbonate Sodium chloride	≥10 - ≤25 ≤5	96-49-1 7647-14-5

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

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

4.1 Description of necessary first aid measures

Eye contact	: Kappa mRNA CISH (Dako Omnis)	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.
	: Lambda mRNA CISH (Dako Omnis)	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.
Inhalation	: Kappa mRNA CISH (Dako Omnis)	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.
	: Lambda mRNA CISH (Dako Omnis)	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.

Section 4. First aid measures

Skin contact	: Kappa mRNA CISH (Dako Omnis)	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.
	Lambda mRNA CISH (Dako Omnis)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: Kappa mRNA CISH (Dako Omnis)	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.
	Lambda mRNA CISH (Dako Omnis)	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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	Causes serious eye irritation. Causes serious eye irritation.
Inhalation	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	No known significant effects or critical hazards. No known significant effects or critical hazards.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact	: Kappa mRNA CISH (Dako Omnis)	Adverse symptoms may include the following: pain or irritation watering redness
	: Lambda mRNA CISH (Dako Omnis)	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Kappa mRNA CISH (Dako Omnis)	No specific data.
	: Lambda mRNA CISH (Dako Omnis)	No specific data.
Skin contact	: Kappa mRNA CISH (Dako Omnis)	No specific data.
	: Lambda mRNA CISH (Dako Omnis)	No specific data.
Ingestion	: Kappa mRNA CISH (Dako Omnis)	No specific data.
	: Lambda mRNA CISH (Dako Omnis)	No specific data.

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

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.
Specific treatments	: Kappa mRNA CISH (Dako Omnis)	No specific treatment.
	: Lambda mRNA CISH (Dako Omnis)	No specific treatment.
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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 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.

5.2 Special hazards arising from the substance or mixture

Section 5. Fire-fighting measures

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

5.3 Advice for firefighters

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.
Special protective equipment for fire-fighters	: Kappa mRNA CISH (Dako Omnis)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Lambda mRNA CISH (Dako Omnis)	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	: Kappa mRNA CISH (Dako Omnis)	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Lambda mRNA CISH (Dako Omnis)	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

<p>For emergency responders</p>	<p>: Kappa mRNA CISH (Dako Omnis)</p>	<p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p>
	<p>Lambda mRNA CISH (Dako Omnis)</p>	<p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p>
<p>6.2 Environmental precautions</p>	<p>: Kappa mRNA CISH (Dako Omnis)</p>	<p>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</p>
	<p>Lambda mRNA CISH (Dako Omnis)</p>	<p>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</p>
<p>6.3 Methods and materials for containment and cleaning up</p>		
<p>Methods for cleaning up</p>	<p>: Kappa mRNA CISH (Dako Omnis)</p>	<p>Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.</p>
	<p>Lambda mRNA CISH (Dako Omnis)</p>	<p>Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.</p>

Section 7. Handling and storage

7.1 Precautions for safe handling

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

Section 7. Handling and storage

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.
7.2 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 unlabeled 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
7.3 Specific end use(s)		
Recommendations	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	Not applicable. Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Kappa mRNA CISH (Dako Omnis) ethylene carbonate Sodium chloride	None. None.
Lambda mRNA CISH (Dako Omnis) ethylene carbonate Sodium chloride	None. None.

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.
- 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

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Kappa mRNA CISH (Dako Omnis)	Liquid.
	: Lambda mRNA CISH (Dako Omnis)	Liquid.
Color	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.
Odor	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.
Odor threshold	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.
pH	: Kappa mRNA CISH (Dako Omnis)	6.2
	: Lambda mRNA CISH (Dako Omnis)	6.2
Melting point	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.
Boiling point	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.
Flash point	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.
Evaporation rate	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.
Flammability (solid, gas)	: Kappa mRNA CISH (Dako Omnis)	Not applicable.
	: Lambda mRNA CISH (Dako Omnis)	Not applicable.
Lower and upper explosive (flammable) limits	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.
Vapor pressure	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.
Vapor density	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.
Relative density	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.
Solubility	: Kappa mRNA CISH (Dako Omnis)	Soluble in the following materials: cold water and hot water.
	: Lambda mRNA CISH (Dako Omnis)	Soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Kappa mRNA CISH (Dako Omnis)	Not available.
	: Lambda mRNA CISH (Dako Omnis)	Not available.

Section 9. Physical and chemical properties

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

- 10.1 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.
- 10.2 Chemical stability** : Kappa mRNA CISH (Dako Omnis) The product is stable.
Lambda mRNA CISH (Dako Omnis) The product is stable.
- 10.3 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.
- 10.4 Conditions to avoid** : Kappa mRNA CISH (Dako Omnis) No specific data.
Lambda mRNA CISH (Dako Omnis) No specific data.
- 10.5 Incompatible materials** : Kappa mRNA CISH (Dako Omnis) May react or be incompatible with oxidizing materials.
Lambda mRNA CISH (Dako Omnis) May react or be incompatible with oxidizing materials.
- 10.6 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

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Kappa mRNA CISH (Dako Omnis)				
ethylene carbonate	LD50 Oral	Rat	10 g/kg	-
Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
Lambda mRNA CISH (Dako Omnis)				
ethylene carbonate	LD50 Oral	Rat	10 g/kg	-

Section 11. Toxicological information

Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
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Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Kappa mRNA CISH (Dako Omnis) ethylene carbonate	Skin - Mild irritant	Rabbit	-	660 milligrams	-
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Lambda mRNA CISH (Dako Omnis) ethylene carbonate	Skin - Mild irritant	Rabbit	-	660 milligrams	-
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

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

Not available.

Information on the 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.

Section 11. Toxicological information

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

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	Adverse symptoms may include the following: pain or irritation watering redness Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	No specific data. No specific data.
Skin contact	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	No specific data. No specific data.
Ingestion	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	No specific data. 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	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: Kappa mRNA CISH (Dako Omnis) Lambda mRNA CISH (Dako Omnis)	No known significant effects or critical hazards. No known significant effects or critical hazards.

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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.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Kappa mRNA CISH (Dako Omnis) Oral	85714.3 mg/kg
Lambda mRNA CISH (Dako Omnis) Oral	85714.3 mg/kg

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Kappa mRNA CISH (Dako Omnis) ethylene carbonate Sodium chloride	Acute LC50 53000 mg/l Fresh water	Fish - Fry	96 hours
	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1.56 g/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
Lambda mRNA CISH (Dako Omnis) ethylene carbonate Sodium chloride	Acute LC50 53000 mg/l Fresh water	Fish - Fry	96 hours
	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1.56 g/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks

Section 12. Ecological information

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Kappa mRNA CISH (Dako Omnis) ethylene carbonate	0.11	-	low
Lambda mRNA CISH (Dako Omnis) ethylene carbonate	0.11	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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. 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 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

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

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

Section 14. Transport information

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

Section 15. Regulatory information

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

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 311: Sodium hydroxide

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

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Kappa mRNA CISH (Dako Omnis) Immediate (acute) health hazard
Lambda mRNA CISH (Dako Omnis) Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Kappa mRNA CISH (Dako Omnis) ethylene carbonate Sodium chloride	≥10 - ≤25 ≤5	No. No.	No. No.	No. No.	Yes. Yes.	No. No.
Lambda mRNA CISH (Dako Omnis) ethylene carbonate Sodium chloride	≥10 - ≤25 ≤5	No. No.	No. No.	No. No.	Yes. Yes.	No. No.

State regulations

Massachusetts : The following components are listed: ETHYLENE CARBONATE
New York : None of the components are listed.
New Jersey : None of the components are listed.
Pennsylvania : The following components are listed: 1,3-DIOXOLAN-2-ONE

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

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.

[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. Other information

[History](#)

Date of issue	: 09/10/2017
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Version	: 1.1

✔ Indicates information that has changed from previously issued version.

[Notice to reader](#)

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