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NGHS / English

horizon

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## 1. IDENTIFICATION

### Product identifier

**Product Name** mRNA Product in Aqueous Solution

### Other means of identification

**Product Code(s)** CASXXXXX, PNPXXXXX, HD-BIOPR12365

### Synonyms

### Recommended use of the chemical and restrictions on use

**Recommended Use** For research use only

**Restrictions on use** No information available

### Details of the supplier of the safety data sheet

**Supplier Identification** Dharmacon, Inc.,  
Horizon Discovery Ltd.

**Address** 2650 Crescent Drive Suite 100,  
Lafayette, CO 80026

**Telephone** Tel: 303-604-9499  
Fax: 303-604-9680

**E-mail** Technical@horizondiscovery.com

### Emergency telephone number

**Company Emergency Phone Number** Chemtrec International: 1-703-741-5970

## 2. HAZARDS IDENTIFICATION

### Classification

The product contains no substances which at their given concentration, are considered to be hazardous to health

**Appearance** No information available**Physical state** Solid Pellets**Odor** No information available**GHS Label elements, including precautionary statements****Hazard statements****Other information****3. COMPOSITION/INFORMATION ON INGREDIENTS****Substance****Synonyms** Ribonucleic acid oligonucleotide

Chemical name	CAS-No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
RNA	63231-63-0	1	-	-
Aqueous Solution	-	99	-	-

**4. FIRST AID MEASURES****First aid measures**

**Inhalation** Remove to fresh air. (Call a physician if symptoms occur).

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact** Wash off immediately with plenty of water. Get medical attention if symptoms occur.

**Ingestion** DO NOT induce vomiting. Get medical attention if symptoms occur.

**Most important symptoms and effects, both acute and delayed****Symptoms** No information available.**Indication of any immediate medical attention and special treatment needed****Note to physicians** Treat symptomatically.**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** No information available.

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation. Use personal protective equipment as required. Avoid generation of dust.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Vacuum or sweep material and place in a disposal container. Avoid generation of dust.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Ensure adequate ventilation. Use personal protection equipment. Avoid generation of dust.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep tightly closed in a dry place. Keep at -80°C.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin and body protection</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	No information available
<b>Odor</b>	No information available
<b>Color</b>	No information available
<b>Odor Threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks Method</u>
<b>pH</b>	No data available	None known
<b>Melting / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash Point</b>	No data available	None known
<b>Evaporation Rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability limit</b>	No data available	
<b>Lower flammability limit</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water Solubility</b>	No data available	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient: n-octanol/water</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

### Other Information

<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Softening Point</b>	No information available
<b>Molecular Weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk Density</b>	No information available
<b>Particle Size</b>	No information available
<b>Particle Size Distribution</b>	No information available

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	No information available.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of Hazardous Reactions</b>	None under normal processing.

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<b>Conditions to avoid</b>	Incompatible materials. Excessive heat. Exposure to air or moisture over prolonged periods.
<b>Incompatible materials</b>	Alcohols.
<b>Hazardous Decomposition Products</b>	Thermal decomposition can lead to release of irritating gases and vapors.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available.

### Information on toxicological effects

<b>Symptoms</b>	No information available.
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### Numerical measures of toxicity

#### Acute Toxicity

<b>Unknown acute toxicity</b>	No information available
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### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	The environmental impact of this product has not been fully investigated.
<b>Persistence and Degradability</b>	No information available.
<b>Bioaccumulation</b>	There is no data for this product.
<b>Mobility</b>	No information available.
<b>Other adverse effects</b>	No information available.

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Do not reuse empty containers.

## 14. TRANSPORT INFORMATION

<b><u>DOT</u></b>	Not regulated
<b>UN-No.</b>	UN1845
<b>Proper Shipping Name</b>	Carbon Dioxide, Solid
<b>Hazard Class</b>	9
<b>Subsidiary class</b>	III

<b><u>TDG</u></b>	Not regulated
<b>UN Number</b>	UN1845
<b>Proper Shipping Name</b>	Carbon Dioxide, Solid
<b>Hazard Class</b>	9
<b>Subsidiary class</b>	III

<b><u>MEX</u></b>	Not regulated
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<b><u>ICAO</u></b>	Not regulated
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<b><u>IATA</u></b>	Not regulated
<b>UN Number</b>	UN1845
<b>Proper Shipping Name</b>	Carbon Dioxide, Solid
<b>Hazard Class</b>	9
<b>Subsidiary class</b>	III

<b><u>IMDG</u></b>	Not regulated
<b>UN Number</b>	UN1845
<b>Proper Shipping Name</b>	Carbon Dioxide, Solid
<b>Hazard Class</b>	9
<b>Packing group</b>	III

**RID** Not regulated

**ADR** Not regulated

**ADN** Not regulated

## 15. REGULATORY INFORMATION

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

#### **International Regulations**

**Ozone-depleting substances (ODS)** Not applicable

**Persistent Organic Pollutants** Not applicable

**Export Notification requirements** Not applicable

#### **International Inventories**

<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDSL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AICS</b>	Contact supplier for inventory compliance status.

#### **Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

### **US Federal Regulations**

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

#### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level

pertaining to releases of this material

### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals.

#### U.S. State Right-to-Know Regulations

This product does not contain any substances above threshold limits that are regulated by state right-to-know.

## 16. OTHER INFORMATION

<b><u>NFPA</u></b>	Health hazards 0	Flammability 0	Instability 0	Physical and Chemical Properties - Personal Protection X
<b><u>HMIS</u></b>	Health hazards 0	Flammability 0	Physical hazards 0	

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**Revision Date** 02-Nov-2022

**Revision Note** No information available

#### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**