

Section 1 - Product and Company Information

Product Name: ORN02/LyoVec™

Cat. Code: tlrl-orn2
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San Diego, California 92121, USA
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Company identification:
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Section 2 - Composition/Information on Ingredients

The above product is composed of RNA and LyoVec™. LyoVec™ is composed of a mixture of ingredients, disclosed below are the ingredients:

Ingredient	CAS No.	EC No.	Classification
DTCPTA (Di-tetradecylphosphoryl-N,N,N-trimethylmethanaminium chloride)	N/A	N/A	Xn, R22,S36/37,S45
DiPPE (1,2-Diphytanoyl-sn-glycero-3-phosphoethanolamine)	201036-16-0	N/A	

Section 3 – Hazards Identification

Emergency Overview: OSHA Hazards: Harmful

HMIS Classification: Health Hazard 2, Flammability Hazard 0, Reactivity Hazard 0

NFPA Rating: Health Hazard 2, Fire 0, Reactivity Hazard 0

Potential Health Effects

- **Eye contact:** May cause eye irritation.
- **Skin contact:** May cause skin irritation.
- **Skin absorption:** May be harmful if absorbed through the skin.
- **Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
- **Ingestion:** Harmful if swallowed.

Section 4 – First Aid Measures

General advice: Consult a physician. Show this material safety data sheet to the doctor in attendance.

After skin contact: Immediately wash skin with soap and plenty of water. Consult a physician.

After swallowing: Never give anything by mouth to an unconscious person. Rinse mouth with water provided person is conscious. Consult a physician.

After inhalation: Remove to fresh air. If not breathing give artificial respiration. Consult a physician.

After eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Consult a physician.

Section 5 – Fire Fighting Measures

Extinguishing Media: Water spray, carbon dioxide, dry chemical powder or appropriate foam.

Special Firefighting Procedures: N/A

Flammability: N/A

Unusual Fire and Explosions Hazard (s): N/A

Flash point: N/A

Auto-ignition Temp: N/A

Section 6 – Accidental Release Measures

Personal precautions: Wear protective equipment. Keep unprotected persons away. Avoid dust formation.

Method for Cleaning Up: Absorb on sand or vermiculite and place in closed containers for disposal. Dispose contaminated material as waste according to section 13. Ventilate area and wash spill site after material clean-up is complete.

Section 7– Handling and Storage

Handling: Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.

User Exposure: Avoid inhalation. Use personal protective equipment (i.e. impermeable gloves, lab coat or apron).

Storage: Store at -20°C.

Section 8 – Exposure Controls / PPE

Engineering Measures: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Hand: Protective gloves to prevent skin contact. **Eye:** Chemical safety goggles

General Hygiene Measures: Wash hands thoroughly after handling.

Section 9 – Physical / Chemical Properties

Appearance: White

Physical State: Solid, lyophilized powder

Solubility in Water: Readily miscible in water

Section 10 – Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Materials to avoid: Strong oxidizing agents

Hazardous Decomposition Products: N/A.

Section 11 – Toxicological Information**Acute toxicity:**

LD50 Oral: N/A

LD50 Dermal: N/A

LD50 Inhalation: N/A

Primary irritant effect: N/A

Sensitization: N/A

Target Organ: N/A

Additional toxicological information: N/A

Section 12 – Ecological Information

Ecotoxicity: Data not yet available.

Mobility: Data not yet available.

Biodegradation: Data not yet available.

Bioaccumulation: Data not yet available.

Section 13 – Disposal Considerations

Product: Observe all federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Must not be disposed of together with household garbage.

Contaminated Packaging: Dispose of as unused product.

Section 14 – Transport Information

DOT (US): Not dangerous goods.

IATA: Not dangerous goods.

IMDG: Not dangerous goods.

Section 15 – Regulatory Information

OSHA HAZARDS (US): OSHA Hazards: Harmful

DSL Status: This product contains the following components that are not on the Canadian DSL nor NDSL lists.

RNA CAS no.: N/A

DTCPTA CAS no.: N/A

DiPPE CAS no.: 201036-16-0

SARA 302 Component: None of the ingredients are listed.

SARA 313 Component: None of the ingredients are listed.

SARA 311/312 Hazards: None of the ingredients are listed.

U.S. State Regulations

Chemical Name	Massachusetts RTK	New Jersey RTK	Pennsylvania RTK
RNA	-	X	X
DTCPTA	-	X	X
DiPPE	-	X	X

California Proposition 65: This product does not contain chemicals listed under Proposition 65.

Labeling, risk and safety phrases according to EU directives:

Xn: Harmful

R22: Harmful if swallowed.

S36/37: Wear suitable protective clothing and gloves.

S45: In case of accident or if you feel unwell, seek medical attention.

Caution: Substance not fully tested.

Section 16 – Other Information

Disclaimer: All InvivoGen products are supplied for research and laboratory use only. Not for drug, household or other uses.

The information contained in this MSDS relates only to the material(s) designated and does not relate to use(s) in combination with any other material, process(es) and/or chemical reaction(s). InvivoGen provides this information in good faith and is based on our present knowledge. This MSDS is provided without warranty of any kind. The recipient is responsible for ensuring that, where applicable, existing laws and guidelines are observed.