GeneCopoeia™
Expressway to Discovery

Material Safety Data Sheet

Revision Date: February 23, 2018

3. IDENTIFICATION OF THE SUBSTRANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code LT008
Product name 293Ta Lentiviral Packaging Cell Line

Contact manufacturer

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USA

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1. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous/Non-hazardous Components

Dimethyl Sulfoxide	CAS.No. 67-68-5	Percentage: 5-10%

2. HAZARDS IDENTIFICATION

Emergency Overview
Warning.
Irritant.
Harmful if absorbed.

Potential Health Effects:

Eye: Can cause moderate irritation, tearing and reddening, but not likely to permanently injure eye tissue.
Skin: Can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage. Upon prolonged or repeated exposure, harmful if absorbed through the skin. May cause minor systemic damage.
Inhalation: Can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache. No toxicity expected from inhalation.
Ingestion:Irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea.
Chronic: No data on cancer.

Principle Routes of Exposure/ Potential Health effects

Eyes	No information available
Skin	No information available
Inhalation	No information available
Ingestion	No information available

HMIS

Health	0
Flammability	0
Reactivity	0

4. FIRST AND MEASURES

Skin contact Wash with soap and water. Get medical attention if irritation develops or persists.

Eye contact Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention.

Ingestion Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this MSDS.

Inhalation Move to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately.

Notes to physician Treat symptomatically

8. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use alcohol resistant foam, carbon dioxide, dry chemical, or water spray when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agentif carefully applied to the fire. Do not direct a water stream directly into the hot burning liquid.

DMSO undergoes a violent exothermic reaction on mixing with copper wool and trichloroacetic acid. On mixing with potassium permanganate it will flash instantaneously. It reacts violently with: acid halides, cyanuric chloride, silicon tetrachloride, phosphorus trichloride and trioxide, thionyl chloride,magnesium perchlorate, silver fluoride, methyl bromide, iodine pentafluoride, nitrogen periodate, diborane, sodium hydride, perchloric and periodic acids. When heated above its boiling point, DMSO degrades giving off formaldehyde,methyl mercaptan, and sulfur dioxide.

Special protective equipment for firefighters

Wear self-contained breathing apparatus and protective suit

7. ACCIDENTAL RELEASE MEASURES

Personal precautions Use personal protective equipment

Spill Cleanup:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this MSDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Ventilate the contaminated area. Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this MSDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Ventilate the contaminated area.

6. HANDLING AND STORAGE

Handling Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Keep closed or covered when not in use.

Storage Pressure Ambient

Storage Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed. Suitable for most general chemical storage areas.

5. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls

Exposure limits Not established

Engineering measures Ensure adequate ventilation to avoid overexposure, especially in confined areas

Personal protective equipment

Respiratory protection	In case of insufficient ventilation wear suitable respiratory equipment
Hand protection	Protective gloves
Eye protection	Safety glasses with side-shields
Skin and body protection	Lightweight protective clothing
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice
Environmental exposure controls	Prevent product from entering drains

13. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Form Liquid

Important Health Safety and Environmental Information

Boiling point/range	°C No data available	°F No data available
Melting point/range	°C No data available	°F No data available
Flash point	°C No data available	°F No data available
Autoignition temperature	°C No data available	°F No data available
Oxidizing properties	No information available	
Water solubility	No data available	

12. STABILITY AND REACTIVITY

Stability Stable under normal conditions.

Conditions to avoid

Strong oxidizing agents. Temperatures above the high flash point of thiscombustible material in combination with sparks, open flames, or other sources of ignition. Strong alkalies. DMSO undergoes a violent exothermic reaction on mixing with copper wool and trichloroacetic acid. On mixing with potassium permanganate it will flash instantaneously. It reacts violently with: acid halides, cyanuric chloride, silicon tetrachloride, phosphorus trichloride and trioxide, thionyl chloride, magnesium perchlorate, silver fluoride, methyl bromide, iodine pentafluoride, nitrogen periodate, diborane, sodium hydride, perchloric and periodic acids. When heated above its boiling point, DMSO degrades giving off formaldehyde, methyl mercaptan, and sulfur dioxide.

Hazardous decomposition products Carbon monoxide. Carbon dioxide. Sulfur containing gases

Polymerization Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Dermal/Skin: DIMETHYL SULFOXIDE: 40 GM/KG
Inhalation/Respiratory: Not determined.
Oral/Ingestion:DIMETHYL SULFOXIDE: 14,500 MG/KG
Target Organs: Blood. Eyes. Skin.

Carcinogenicity

NTP: Not tested.
IARC: Not listed.
OSHA: Not regulated.

Other Toxicological Information

10. ECOLOGICAL INFORMATION

Ecotoxicity effects	No information available.
Mobility	No information available.
Biodegradation	Biodegrades slowly
Bioaccumulation	Does not bioaccumulate.

9. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations

16. TRANSPORT INFORMATION

Not determined

15. REGULATARY INFORMATION

UNITED STATES:
TSCA:
This product is solely for research and development purposes only and may not be used, processed or distributed for a commercial purpose. It may only be handled by technically qualified individuals.
Prop 65 Listed Chemicals: No Prop 65 Chemicals.
No 313 Chemicals

CANADA:

DSL/NDSL: Not determined.

COMPONENT DIMETHYL SULFOXIDE
WHMIS Classification D2B

EUROPEAN UNION:
PRODUCT RISK PHRASES: None assigned.
PRODUCT SAFETY PHRASES: Not applicable.
PRODUCT CLASSIFICATION: Not classified

COMPONENT DIMETHYL SULFOXIDE
EINECS NUMBER 200-664-3

14. OTHER INFORMATION

HMIS Rating 0-4:
FIRE: Not determined.
HEALTH: Not determined.
REACTIVITY: Not determined.
Abbreviations
N/A - Data is not applicable or not available
SARA - Superfund and Reauthorization Act
HMIS - Hazard Material Information System
WHMIS - Workplace Hazard Materials Information System
NTP - National Toxicology Program
OSHA - Occupational Health and Safety Administration
IARC - International Agency for Research on Cancer
PROP 65 - California Safe Drinking Water and Toxic Enforcement Act of 1986
EINECS - European Inventory of Existing Commercial Chemical Substances

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End of Safety Data Sheet