

# SAFETY DATA SHEET

Product Identifier: Lanthanide Conjugated Proteins

SDS ID: MSDS-3000000X, Rev: 11

Catalog ID number: 3000000X–3999999X (stand-alone, lanthanide conjugated antibodies only)

(Includes Panel Kits within the following range of Catalog numbers: 201302–2013XX; 201402-2014XX and 2015XX)

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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### Contact information

**General** Fluidigm Corporation  
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<b>Product identifier</b>	Lanthanide Conjugated Proteins
<b>Synonyms</b>	None identified
<b>Trade names</b>	None identified
<b>Chemical family</b>	Mixture; contains sodium azide
<b>Relevant identified uses of the substance or mixture and uses advised against</b>	For research use only. Not for use in diagnostic procedures.
<b>Note</b>	This SDS is written to address potential health and safety issues associated with the handling of the formulated product.

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## SECTION 2: HAZARDS IDENTIFICATION

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### Classification of the substance or mixture

**Globally Harmonized System [GHS]** Not classified

**AU hazard classification (NOHSC)** Hazardous substance. Non-hazardous goods.

### Label elements

**CLP/GHS hazard pictogram** None required

**CLP/GHS signal word** None required

**CLP/GHS hazard statements** None required

**CLP/GHS precautionary statements** None required

**Other hazards** Mixture; contains sodium azide. The most common adverse effects reported with exposure to sodium azide include dizziness, headache, nausea and vomiting, rapid breathing and heart rate, restlessness, weakness, runny nose, cough, and red eyes. Overexposure to sodium azide may cause convulsions, low blood pressure, loss of consciousness, lung injury, reduced heart rate, and potentially fatal respiratory failure. Inhalation of sodium azide may cause respiratory irritation.

**Note** This mixture is not classified as hazardous according to Regulation EC No 1272/2008 (EU CLP) and Hazard Communication Standard No. 1910.1200 (US OSHA). The pharmacological, toxicological and ecological properties of this mixture have not been fully characterized.

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**(Includes Panel Kits within the following range of Catalog numbers: 201302–2013XX; 201402-2014XX and 2015XX)**
**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Ingredient</u>	<u>CAS No.</u>	<u>EINECS/ ELINCS No.</u>	<u>Amount</u>	<u>GHS Classification</u>
Sodium azide	26628-22-8	247-852-1	0.05%	ATO2: H300; AA1: H400; CA1: H410; EUH032
Glycerol	56-81-5	200-289-5	50%	No data available

**Note** The ingredients listed above are considered hazardous. The remaining components are non-hazardous and/or present at amounts below reportable limits. See Section 16 for full text of GHS classifications.

**SECTION 4: FIRST-AID MEASURES**
**Description of first-aid measures**

<b>Immediate medical attention needed</b>	Yes
<b>Eye contact</b>	If easy to do, remove contact lenses, if worn. Immediately flush eyes with copious quantities of water for at least 15 minutes. If irritation occurs or persists, notify medical personnel and supervisor.
<b>Skin contact</b>	Wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation occurs or persists, notify medical personnel and supervisor.
<b>Inhalation</b>	Immediately move exposed subject to fresh air. If not breathing, give artificial respiration. If breathing is labored, administer oxygen. Immediately notify medical personnel and supervisor.
<b>Ingestion</b>	Do not induce vomiting unless directed by medical personnel. Do not give anything to drink unless directed by medical personnel. Never give anything by mouth to an unconscious person. Notify medical personnel and supervisor.
<b>Protection of first-aid responders</b>	See Section 8 for Exposure Controls/Personal Protection recommendations.
<b>Most important symptoms and effects, both acute and delayed</b>	See Sections 2 and 11.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Contains low levels of sodium azide. Medical conditions aggravated by exposure: none known or reported. Treat symptomatically and supportively.

**SECTION 5: FIREFIGHTING MEASURES**

<b>Extinguishing media</b>	Use water spray (fog), foam, dry powder, or carbon dioxide as appropriate for surrounding fire and materials.
<b>Specific hazards arising from the substance or mixture</b>	No information identified. May emit nitrogen-containing compounds.
<b>Flammability/explosivity</b>	No information identified
<b>Advice for firefighters</b>	Wear full protective clothing and a self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode. Decontaminate all equipment after use.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions, protective equipment, and emergency procedures</b>	If product is released or spilled, take proper precautions to minimize exposure by using appropriate personal protective equipment (see Section 8). Area should be adequately ventilated. Do not breathe mist/vapors/spray.
<b>Environmental precautions</b>	Do not empty into drains. Avoid release to the environment.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES...continued**

**Methods and material for containment and cleaning up** If vials are crushed or broken, DO NOT CAUSE MATERIAL TO BECOME AIRBORNE. For small spills, soak up material with absorbent, for example, paper towels. For large spills, cordon off spill area and minimize the spreading of spilled material. Soak up material with absorbent. Collect spilled material, absorbent, and rinse water into suitable containers for proper disposal in accordance with applicable waste disposal regulations (see Section 13). Decontaminate the area twice.

**Reference to other sections** See Sections 8 and 13 for more information.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for safe handling** Avoid breathing vapor or mist. Do not permit eating/drinking/smoking near this material. All materials used for transferring or preparing this product must be considered contaminated and disposed of properly.

**Conditions for safe storage including any incompatibilities** Store at 2-8°C in tightly closed container. Avoid strong oxidizers. Store in sealed containers that are appropriately labeled.

**Specific end uses** No information identified

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Note** Dispose of broken vials/syringes in a sharps container.

**Control Parameters/occupational exposure limit values**

<u>Compound</u>	<u>Issuer</u>	<u>Type</u>	<u>OEL</u>
Sodium azide	ACGIH, Australia, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Romania, Slovakia, Slovenia, Spain, Sweden, US-California OSHA, United Kingdom	OEL-STEL	0.3 mg/m <sup>3</sup>
	New Zealand, Portugal	Ceiling	0.29 mg/m <sup>3</sup>
	ACGIH, Australia, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Romania, Slovakia, Slovenia, Spain, Sweden, US-California OSHA, United Kingdom	OEL-TWA	0.1 mg/m <sup>3</sup>
	NIOSH, US-California OSHA	Ceiling	0.3 mg/m <sup>3</sup>
	Germany	OEL-STEL	0.4 mg/m <sup>3</sup>
	Germany	OEL-TWA	0.2 mg/m <sup>3</sup>

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## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION ...continued

Compound	Britain EH40	France VL	Europe
Glycerol	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	No data
	OSHA TWA PEL: 15 (dust); 5 (resp.) mg/m <sup>3</sup>	ACGIH TWA TLV: 10 mg/m <sup>3</sup>	Other Limits No data

<b>Exposure/engineering controls</b>	If handling bulk product or vials are opened/crushed/broken: Selection and use of containment devices and personal protective equipment should be based on a risk assessment of exposure potential. Use local exhaust and/or enclosure at aerosol/mist-generating points. Emphasis is to be placed on closed material transfer systems and process containment, with limited open handling. High-energy operations should be done within an approved emission control or containment system.
<b>Respiratory protection</b>	If handling bulk product or vials are opened/crushed/broken: Choice of respiratory protection should be appropriate to the task and the level of existing engineering controls. For routine powder handling tasks, an approved and properly fitted air purifying respirator should provide ancillary protection based on the known or foreseeable limitations of existing engineering controls.
<b>Hand protection</b>	Wear nitrile or other impervious gloves if skin contact is possible. When the material is diluted in an organic solvent, wear gloves that provide protection against the solvent.
<b>Skin protection</b>	Wear appropriate gloves, lab coat, or other protective overgarment if skin contact is likely. Base the choice of skin protection on the job activity, potential for skin contact, and solvents and reagents in use.
<b>Eye/face protection</b>	Wear safety glasses with side shields, chemical splash goggles, or full face shield if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available.
<b>Environmental exposure controls</b>	Avoid release to the environment and operate within closed systems wherever practicable. Air and liquid emissions should be directed to appropriate pollution control devices. In case of spill, do not release to drains. Implement appropriate and effective emergency response procedures to prevent release or spread of contamination and to prevent inadvertent contact by personnel.
<b>Other protective measures</b>	Wash hands in the event of contact with this product/mixture, especially before eating, drinking, or smoking. Protective equipment is not to be worn outside the work area (for example, in common areas or out-of-doors).

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Clear liquid
<b>Color</b>	Colorless
<b>Odor</b>	Odorless
<b>Odor threshold</b>	No information identified
<b>pH</b>	No information identified
<b>Melting point/freezing point</b>	No information identified
<b>Initial boiling point and boiling range</b>	No information identified
<b>Flash point</b>	No information identified
<b>Evaporation rate</b>	No information identified
<b>Flammability (solid, gas)</b>	No information identified

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**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES...continued**

<b>Upper/lower flammability or explosive limits</b>	No information identified
<b>Vapor pressure</b>	No information identified
<b>Vapor density</b>	No information identified
<b>Relative density</b>	No information identified
<b>Water solubility</b>	Fully soluble in water
<b>Solvent solubility</b>	No information identified
<b>Partition coefficient (n-octanol/water)</b>	No information identified
<b>Auto-ignition temperature</b>	No information identified
<b>Decomposition temperature</b>	No information identified
<b>Viscosity</b>	No information identified
<b>Explosive properties</b>	No information identified
<b>Oxidizing properties</b>	No information identified

**Other information**

<b>Molecular weight</b>	Not applicable (mixture)
<b>Molecular formula</b>	Not applicable (mixture)

**SECTION 10: STABILITY AND REACTIVITY**

<b>Reactivity</b>	Sodium azide may react with lead or copper plumbing to form highly explosive metal azides.
<b>Chemical stability</b>	Stable
<b>Possibility of hazardous reactions</b>	No information identified
<b>Conditions to avoid</b>	Keep away from strong oxidizing agents.
<b>Incompatible materials</b>	Strong oxidizing agents
<b>Hazardous decomposition products</b>	May form carbon dioxide and carbon monoxide, metal oxides

**SECTION 11: TOXICOLOGICAL INFORMATION**
**Information on toxicological effects**

**Route of entry** May be absorbed by inhalation, skin contact, and ingestion.

**Acute toxicity**

<u>Compound</u>	<u>Type</u>	<u>Route</u>	<u>Species</u>	<u>Dose</u>
Sodium azide	LD50	Oral	Rat	27 mg/kg
	LD50	Oral	Mouse	27 mg/kg
	LD50	Dermal	Rabbit	20 mg/kg
Glycerol	LD50	Oral	Rat	12,600 mg/kg
	LD50	Dermal	Rabbit	10,000 mg/kg

**Irritation/Corrosion** No studies identified

**Sensitization** No studies identified

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## SECTION 11 - TOXICOLOGICAL INFORMATION...continued

<b>STOT; single exposure</b>	No studies identified
<b>STOT; repeated exposure/repeat-dose toxicity</b>	No studies identified
<b>Reproductive toxicity</b>	No studies identified
<b>Developmental toxicity</b>	No studies identified
<b>Genotoxicity</b>	No studies identified
<b>Carcinogenicity</b>	No studies identified. This mixture is not listed by NTP, IARC, ACGIH, or OSHA as a carcinogen.
<b>Aspiration hazard</b>	No data available
<b>Human health data</b>	See "Other hazards" in Section 2

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity

Compound	Type	Species	Concentration
Sodium azide	LC <sub>50</sub> /96 hr	<i>Oncorhynchus mykiss</i>	0.8 mg/L
	LC <sub>50</sub> /96 hr	<i>Lepomis macrochirus</i>	0.7 mg/L
	LC <sub>50</sub> /96 hr	<i>Pimephales promelas</i>	5.46 mg/L
Glycerol	LC <sub>50</sub> /96 hr	<i>Oncorhynchus mykiss</i>	51–57 mL/L

**Additional toxicity information** Sodium azide is toxic to aquatic organisms and should not be allowed to accumulate in metal piping because it has the potential to form explosive mixtures.

**Persistence and degradability** No data identified

**Bioaccumulative potential** No data identified

**Mobility in soil** No data identified

**Results of PBT and vPvB assessment** Not performed

**Other adverse effects** No data identified

**Note** The environmental characteristics of this product/mixture have not been fully investigated. The above data are for the active ingredient and/or any other ingredients where applicable. Although present at low concentrations, disposal should consider that sodium azide is present. Releases to the environment should be avoided.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods** Dispose of wastes in accordance with prescribed federal, state, and local guidelines, for example, in an appropriately permitted chemical waste incinerator. Do not send down the drain or flush down the toilet. All wastes containing the material should be properly labeled. Rinse waters resulting from spill cleanups should be discharged in an environmentally safe manner, for example, in an appropriately permitted municipal or onsite wastewater treatment facility.

## SECTION 14: TRANSPORT INFORMATION

**Transport** Based on the available data, this mixture is not regulated as a hazardous material/ dangerous good under EU ADR/RID, US DOT, Canada TDG, IATA, or IMDG.

**UN number** None assigned

**UN proper shipping name** None assigned

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**SECTION 14 - TRANSPORT INFORMATION...continued**

<b>Transport hazard classes and packing group</b>	None assigned
<b>Environmental hazards</b>	Based on the available data, this mixture is not regulated as an environmental hazard or a marine pollutant.
<b>Special precautions for users</b>	No special precautions needed. Avoid release to the environment.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable
<b>Hazchem Code/HIN</b>	None assigned

**SECTION 15: REGULATORY INFORMATION**

<b>Safety, health, and environmental regulations/legislation specific for the substance or mixture</b>	This SDS complies with the requirements under US, EU, and GHS (EU CLP, Regulation EC No. 1272/2008) guidelines. Consult your local/regional authorities for more information.
<b>Chemical safety assessment</b>	Not conducted
<b>WHMIS classification</b>	Not classified
<b>TSCA status</b>	Not listed
<b>SARA section 313</b>	Not listed
<b>California proposition 65</b>	Not listed
<b>Component analysis: state</b>	Sodium azide is listed as hazardous in CA, HI, MA, MN, NJ, PA, RI, VT, and WA.
<b>Component analysis: chemical inventory</b>	Sodium azide is listed in the chemical inventory of the following countries: Australia, Canada, China, EU, Japan, New Zealand, and the Philippines.
<b>Additional information</b>	No other information identified

**SECTION 16: OTHER INFORMATION**

<b>NFPA ratings</b>	<table border="0" style="display: inline-table; vertical-align: top;"> <tr> <td style="padding-right: 20px;"><b>Sodium azide</b></td> <td>Health: 3</td> <td>Fire: 0</td> <td>Reactivity: 2</td> </tr> <tr> <td><b>Glycerol</b></td> <td>Health: 1</td> <td>Fire: 0</td> <td>Reactivity: 0</td> </tr> </table>	<b>Sodium azide</b>	Health: 3	Fire: 0	Reactivity: 2	<b>Glycerol</b>	Health: 1	Fire: 0	Reactivity: 0
<b>Sodium azide</b>	Health: 3	Fire: 0	Reactivity: 2						
<b>Glycerol</b>	Health: 1	Fire: 0	Reactivity: 0						
<b>Full text of H phrases and GHS classifications</b>	ATO2: Acute Toxicity (Oral) Category 2. H300: Fatal if swallowed. AA1: Acute aquatic toxicity Category 1. H400: Very toxic to aquatic life. CA1: Aquatic toxicity (chronic) Category 1. EUH032: Contact with acids liberates very toxic gas.								
<b>Sources of data</b>	Information from published literature and internal company data								

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## SECTION 16: OTHER INFORMATION...continued

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### Abbreviations

ACGIH, American Conference of Governmental Industrial Hygienists; ADR/RID, European Agreement Concerning the International Carriage of Dangerous Goods by Road/Rail; AIHA, American Industrial Hygiene Association; AU, Australia; CA, California; CAS No., Chemical Abstract Services Number; CLP, Classification, Labelling, and Packaging of Substances and Mixtures; DNEL, derived no-effect level; DOT, Department of Transportation; EH, environmental hygiene; EINECS, European Inventory of New and Existing Chemical Substances; ELINCS, European List of Notified Chemical Substances; EU, European Union; GHS, Globally Harmonized System of Classification and Labelling of Chemicals; HI, Hawaii; HIN, hazard identification number; IARC, International Agency for Research on Cancer; IBC, international bulk chemical; IDLH, immediately dangerous to life or health; IATA, International Air Transport Association; IMDG, International Maritime Dangerous Goods; LOEL, lowest observed effect level; LOAEL, lowest observed adverse effect level; MA, Massachusetts; MARPOL, International Convention for the Prevention of Pollution from Ships; MN, Minnesota; NFPA, National Fire Protection Association; NJ, New Jersey; NIOSH, The National Institute for Occupational Safety and Health; NOAEL, no observed adverse effect level; NOEL, no observed effect level; NOHSC, National Occupational Health and Safety Commission; NTP, National Toxicology Program; OEL, Occupational Exposure Limit; OSHA, Occupational Safety and Health Administration; PA, Pennsylvania; PBT, persistent, bioaccumulative, toxic; PEL, permissible exposure limit; PNEC, predicted no effect concentration; RI, Rhode Island; SARA, Superfund Amendments and Reauthorization Act; STEL, short-term exposure limit; STOT, specific target organ toxicity; TDG, Transportation of Dangerous Goods; TLV, threshold limit value; TSCA, Toxic Substances Control Act; TWA, time-weighted average; VL, valeurs limites d'exposition professionnelle aux agents chimiques en France; vPvB, very persistent, very bioaccumulative; VT, Vermont; WA, Washington; WHMIS, Workplace Hazardous Materials Information System

### Issue date

Sept 2020

### Revisions

Revision 11: CHG-002400

Summary of revision: Added "lanthanide-conjugated antibodies only" next to catalog ID number. Changed title from "Metal-conjugated Proteins" to "Lanthanide Conjugated Proteins".

### Disclaimer

The information and recommendations in this safety data sheet are, to the best of Supplier's knowledge, accurate as of the date of issue. Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Safety Data Sheet before handling product. For Research Use Only. Not for use in diagnostic procedures.