SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

| Product code | EXAB003 | |
|--------------|------------------|--|
| Product name | His Tag Antibody | |

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

Relevant identified uses For research use only. Not for use in diagnostic procedures.

Uses advised against

Not for consumer use.

Company/undertaking identification

Exreprotein, LLC. 2726 Summer Street NE Minneapolis, MN 55413 (800) 215-0202 www.exreprotein.com

Emergency Telephone Number

(800) 215-0202

SECTION 2: Hazards identification

Australian SDS Statement

Not classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonised System (GHS)

GHS Classification

Health hazards Not Hazardous

Physical hazards Not Hazardous

Environmental hazards Not Hazardous

Label elements

Signal Word None

Hazard pictograms None

Hazard pictograms names None



Hazard Statements

Not Applicable

Precautionary Statements

Prevention Not Applicable

Response Not Applicable

Storage Not Applicable

Disposal Not Applicable

Other hazards

Not Applicable

SECTION 3: Composition/information on ingredients

| Component | CAS No | Common name | EINECS No. | Weight % |
|-----------|---------|-------------|------------|----------|
| Glycerin | 56-81-5 | _ | 200-289-5 | 40-70 |
| | | | | |

We recommend handling all chemicals with caution.

Mixtures

No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

Description of first aid measures

| Skin contact Eye contact | Rinse skin with water. Immediate medical attention is not required. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
|-----------------------------|--|
| Ingestion | Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice. |
| Inhalation | If breathed in, move person into fresh air. If not breathing, give artificial respiration. |
| Notes to Physician | Treat symptomatically. |

Most important symptoms and effects, both acute and delayed Not Applicable

Indication of any immediate medical attention and special treatment needed None.

SECTION 5: Firefighting measures

| Extinguishing media | |
|------------------------------|--|
| Suitable extinguishing media | Water spray. Carbon dioxide Foam . Dry chemical. |



Unsuitable extinguishing media

No information available.

Special hazards arising from the substance or mixture Not known

Protective equipment and precautions for firefighters Standard procedure for chemical fires.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation Always wear recommended Personal Protective Equipment Use personal protection equipment See section 8 for more information

Environmental precautions

No special environmental precautions required.

Methods and material for containment and cleaning up

Soak up with inert absorbent material.

Reference to other sections

See section 8 for more information .

SECTION 7: Handling and storage

Precautions for safe handling

Use personal protective equipment as required. No special handling advices are necessary.

Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers.

Specific end use(s)

For research use only. Not for use in diagnostic procedures.

SECTION 8: Exposure controls/personal protection

Control parameters

| ChemicalName | Australia STEL | Australia | Australia – Skin Absorbers | Australia - OES - Peak |
|--------------|----------------|----------------------|----------------------------|------------------------|
| Glycerin | None | 10 mg/m ³ | None | None |
| 56-81-5 | | | | |

| Chemical Name | New Zealand – Workplace Exposure Limits | New Zealand TWA | New Zealand STEL | New Zealand Ceiling Limits |
|---------------|--|----------------------|------------------|-------------------------------|
| Glycerin | None | 10 mg/m ³ | None | None |
| 56-81-5 | | | | |

| Chemical Name | China OEL (MAC) | China - Skin Absorbers | Hong Kong OEL |
|---------------|-----------------|------------------------|---------------|
| Glycerin | None | None | None |
| 56-81-5 | | | |

| Chemical Name | Korea OEL (CEILING) | Korea OEL (TWA) | Korea OEL (STEL) |
|---------------|----------------------------|-------------------|------------------|
| Glycerin | None | 10 mg/m3 | None |
| 56-81-5 | | | |
| | | | |
| Chemical Name | Korea OEL (Skin Notations) | Korea PEL (STELs) | Korea PEL (TWAs) |



| Glycerin 56-81-5 | None | None | None |
|---------------------|-------------------------|---------------------------------------|--------------------------------------|
| Chemical Name | Korea OEL (Carcinogens) | Korea OEL (Germ Cell Mutagenicity) | Korea OEL (Reproductive Toxicity) |
| Glycerin 56-81-5 | None | None | None |

| Chemical Name | Taiwan OEL - TWA | Taiwan OEL (Skin notations, Carcinogens) | Taiwan OEL (STELs) | Taiwan OEL (Ceilings) |
|---------------|------------------|---|--------------------|-----------------------|
| Glycerin | None | None | None | None |
| 56-81-5 | | | | |

| Chemical Name | Singapore OEL (PEL) | Singapore OEL (STEL) |
|---------------|---------------------|----------------------|
| Glycerin | 10 mg/m3 | None |
| 56-81-5 | | |

| Chemical Name | ACGIH OEL (TWA) | ACGIH OEL (STEL) |
|---------------|-----------------|------------------|
| Glycerin | None | None |
| 56-81-5 | | |

Engineering Measures

Ensure adequate ventilation, especially in confined areas

Exposure controls

Personal Protective Equipment

| Respiratory protection | In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards. | |
|--------------------------|---|--|
| Hand protection | Wear suitable gloves Glove material: Compatible chemical-resistant gloves. | |
| Eye protection | Tight sealing safety goggles | |
| Skin and Body Protection | Wear suitable protective clothing | |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice | |

Environmental exposure controls

No special environmental precautions required.

SECTION 9: Physical and chemical properties

| Information on basic physical and chemical properties | | | |
|---|-------------------|------------|--|
| Appearance | liquid | | |
| Odour | No data avail | able | |
| Odour Threshold | No data | | |
| Molecular Weight | No data | | |
| рН | No data available | | |
| Melting point / melting range | °C No data | °F No data | |
| Boiling point / boiling range | °C No data | °F No data | |
| Flash point | °C No data | °F No data | |
| Autoignition Temperature | °C No data | °F No data | |



| Decomposition temperature | °C No data °F No data | | |
|--------------------------------------|---|--|--|
| Evaporation rate | No data | | |
| Flammability (solid, gas) | No data available | | |
| Upper explosion limit | No data | | |
| Lower explosion limit | No data | | |
| Vapour Pressure | No data | | |
| Vapour density | No data | | |
| Relative density | No data | | |
| Specific gravity | No data | | |
| Solubility | No data available | | |
| Partition coefficient | No data available | | |
| n-octanol/water Viscosity | No data | | |
| Explosive properties | No data | | |
| Oxidising properties | No data | | |
| Other information | | | |
| No data available. | | | |
| SECTION 10: Stability and reactivity | | | |
| Reactivity | No data available. | | |
| Chemical stability | Stable under normal conditions. | | |
| Possibility of hazardousreactions | Hazardous reaction has not been reported. | | |
| Conditions to avoid | No information available. | | |
| Incompatible materials | No dangerous reaction known under conditions of normal use. | | |
| Hazardous decomposition products | No data available. | | |
| | | | |

SECTION 11: Toxicological information

Information on toxicological effects

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|---------------------|-------------------|-----------------------------|
| Glycerin | = 12600 mg/kg (Rat) | No data available | >570mg/m ³ (Rat) |

Principal Routes of Exposure

| Acute toxicity Data are conclusive but insufficient for classification. | | | | |
|---|--|--|--|--|
| Skin corrosion/irritation Data are conclusive but insufficient for classification | | | | |
| Serious eye damage/irritation Data are conclusive but insufficient for classification | | | | |
| Respiratory or skin sensitisation Data are conclusive but insufficient for classification | | | | |
| Specific target organ toxicity(STOT) – single exposure Data are conclusive but insufficient for classification | | | | |
| Specific target organ toxicity(STOT) – repeated exposure Data are conclusive but insufficient for classification | | | | |
| Carcinogenicity Data are conclusive but insufficient for classification | | | | |
| Germ cell mutagenicity Data are conclusive but insufficient for classification | | | | |
| Reproductive toxicity Data are conclusive but insufficient for classification | | | | |
| Aspiration hazard Data are conclusive but insufficient for classification | | | | |

SECTION 12: Ecological information

Ecotoxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

| Chemical Name | Toxicity to algae | Toxicity to daphnia and other aquatic | Toxicity to fish | Microtox Data | log Pow |
|---------------|-------------------|--|------------------|------------------|---------|
| | | invertebrates | | Data | |



| Glycerin | No data available | Daphnia magna | No data available | No data available | logPow-1.76 | |
|-------------------|-------------------|--------------------------|-------------------|-------------------|-------------|--|
| | | EC50>500 mg/L (24 h) | | | | |
| | | | | | | |
| Mobility in soil | | No information available | 2. | | | |
| Persistence and o | legradability | No information available | 2. | | | |
| Bioaccumulative | potential | No information available | e. | | | |

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other adverse effects No information available.

SECTION 13: Disposal considerations

Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations

| UN number | Not Applicable |
|----------------------------|----------------|
| UN proper shipping name | Not Applicable |
| Transport hazard class(es) | Not Applicable |
| Packing group | Not Applicable |

Environmental hazards Not Applicable

Special precautions for user Not Applicable

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

SECTION 15: Regulatory information

International Inventories

| Chemical Name | US TSCA | Canada (DSL) | NDSL | PICCS (Philippines) |
|---------------|---------|--------------|------|---------------------|
| Glycerin | Listed | Listed | - | Listed |
| | | | | |

| Chemical Name | ENCS (Japan) | IECSC - China Inventory South Korea (KECL) AICS (Australia) | South Korea (KECL) | AICS (Australia) |
|---------------|--------------|--|-----------------------|------------------|
| | | of Existing Chemical Substances | . , | |
| Glycerin | Listed | Listed | Listed | Listed |

| Chemical Name | NZIoC - New Zealand Inventory of Chemicals | EINECS (European Union) | ELINCS (European List of Notified Chemical Substances) |
|---------------|---|-------------------------|---|
| Glycerin | Listed | Listed | - |

United Nations-Chemical Weapons Convention, CWC



Not Applicable.

Korea

Occupational Safety and Health Act

| Chemical Name | ISHA - Controlled substance - Metal | ISHA -Controlled substance- Organic material | ISHA - Controlled substance- Acids and bases | ISHA - Controlled substance- Gas phase substance |
|---------------|--|--|--|---|
| Glycerin | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

| Chemical Name | ISHA - Prohibition of production, import, transfer or supply of hazardous substances | ISHA - Hazardous substances requiring permission | Special management materials |
|---------------|---|--|------------------------------|
| Glycerin | Not Applicable | Not Applicable | Not Applicable |

| Chemical Name | Harmful agents subject to work environment monitoring - Organic compounds | Harmful agents subject to work environment monitoring - Metals | Harmful agents subject to work environment monitoring - Acids and alkalis | Harmful agents subject to work environment monitoring - Gas- phase substances | Harmful agents subject to work environment monitoring - Dusts |
|---------------|--|---|---|--|---|
| Glycerin | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

| Chemical Name | Harmful agents subject to workers requiring health examination - Organic compounds | Harmful agents subject to workers requiring health examination - Metals | Harmful agents subject to workers requiring health examination - Acids and alkalis | Harmful agents subject to workers requiring health examination - Gas- phase substances | Harmful agents subject to workers requiring health examination - Dusts |
|---------------|--|--|--|--|--|
| Glycerin | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

| Chemical Name | Korea OEL (CEILING) | Korea OEL (TWA) | Korea OEL (STEL) | Korea OEL (SkinNotations) |
|---------------|------------------------|-----------------|------------------|------------------------------|
| Glycerin | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

| Chemical Name | Korea OEL (Carcinogens) | Korea OEL (Germ Cell Mutagenicity) | Korea OEL (Reproductive Toxicity) | Korea PEL (STELs) | Korea PEL (TWAs) |
|---------------|----------------------------|---------------------------------------|---|----------------------|---------------------|
| Glycerin | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

| Chemical Name | ISHA - Harmful or Dangerous Substances Subject to Submission of Process Safety Reports - Storage | ISHA - Harmful or Dangerous Substances Subject to Submission of Process Safety Reports - Manufacturing or Handling |
|---------------|--|--|
| Glycerin | Not Applicable | Not Applicable |

Chemical Control Act

| Chemical Name | Toxic substances | Prohibited substances | Restricted substances |
|---------------|------------------|---------------------------------------|---------------------------------|
| Glycerin | Not Applicable | Not Applicable | Not Applicable |
| | | | |
| Chemical Name | Threshold (%) | Production/Use Quantity Limits | Custody/Storage Quantity Limits |
| Glycerin | Not Applicable | Not Applicable | Not Applicable |

| Chemical Name | Pollutant Release and Transfer Registers (PRTR) - Group I | Pollutant Release and Transfer Registers (PRTR) - Group II |
|---------------|--|---|
| Glycerin | Not Applicable | Not Applicable |

Chemical Registration, Evaluation, etc. Act (K-REACH)

| Chemical Name | Ministry of Environment – CMR risk | Ministry of Environment - Critically Controlled Substance | Existing substances eligible for registration | Substances Exempted from Registration or Notification -Annex 1 | Substances Exempted from Registration or Notification-Annex 2 |
|---------------|--|--|---|--|---|
| Glycerin | Not Applicable | Not Applicable | Not Applicable | Index No. 4-d | Not Applicable |



Hazardous Substance Safety Control Act

| Chemical Name | Hazardous Substance Safety Control Act |
|---------------|--|
| Glycerin | Not Applicable |

Wastes ControlAct

| Chemical Name | Wastes Control Act |
|---------------|--------------------|
| Glycerin | Not Applicable |

<u>Taiwan</u>

| Chemical Name | Toxic Chemical Substances Control Act - Classification and Control Levels | Toxic Chemical Substances Control Act - Threshold Regulated Quantities | Hazard Prevention Standard for Specified Chemical Substances |
|---------------|---|---|---|
| Glycerin | Not Listed | Not Listed | Not Listed |

China

| Chemical Name | China - Catalogue of Occupational Hazard | China - Dangerous Goods List | China - Catalog of Hypertoxic Chemicals | China - List of Dangerous Chemicals for Priority |
|------------------|---|---------------------------------|--|---|
| | Factors | | | Management |
| Glycerin | Not Listed | Not Listed | Not Listed | Not Listed |

SECTION 16: Other information

For research use only. Not for use in diagnostic procedures.

References

- ECHA: http://echa.europa.eu/
- TOXNET: http://toxnet.nlm.nih.gov/
- eChemPortal: http://www.echemportal.org/
- LOLI database: https://www.chemadvisor.com/loli-database

Abbreviations and Acronyms

- TWA -Time Weighted Average
- OELs -Occupational Exposure Limits
- STEL -Short Term Exposure Limit
- DSL/NDSL -Canadian Domestic Substance List/Non-Domestic Substance List
- KECL -Existing and Evaluated Chemical Substances in Korea
- ENCS -Existing and New Chemical Substances in Japan
- IECSC -Inventory of Existing Chemical Substances in China
- PICCS -Philippine Directory of Chemicals and Chemical Substances
- AICS -Australian List of Chemical Substances
- NZIoC -New Zealand Chemicals Inventory
- EINECS/ELINCS European List of Existing Chemical Substances / European List of Notified Chemical Substances
- TSCA -U.S. Toxic Substances Control Challenge Chapter 8(b) Table of Contents
- CEPA -Canadian Environmental Protection Act
- EPA -Environmental Protection Agency
- OSHA -U.S. Department of Labor Occupational Safety and Health Administration
- IATA -U.S. Department of Labor Occupational Safety and Health Administration
- DOT -Department of Transportation
- IMDG -International Sea Freight Dangerous Goods
- ACGIH -American Association of Government Industrial Hygiene Professionals
- NIOSH -National Institute for Occupational Safety and Health
- AIHA -American Industrial Hygiene Association
- HMIS -Department of Defense Hazardous Substances Information System
- NTP -National Toxicology Program
- IARC -International Agency for Research on Cancer



MSDS No.: MSDS#EXAB003 Product Name: His Tag Antibody First Revision Date: 2024.04.15 Last Revision Date: 2024.04.15 Version No.:1.0

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End of Safety Data Sheet

