



Safety Data Sheet

This safety data sheet was created pursuant to the requirements of: The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

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Version : 1

1. IDENTIFICATION

Product identifier

Product Name Tuj1 , monoclonal antibody

Other means of identification

Catalog NO IRM008

Registration Number(s) No information available

Recommended use of the chemical and restrictions on use

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

Supplier's details

Manufacturer iReal Biotechnology, Inc.

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Tel: +886-3-5260005

Emergency telephone number

Emergency Telephone +886-3-5260005

E-mail address irealbio@irealbio.com

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

| | |
|--------------------|--------------------------------|
| Skin sensitization | Skin sensitization Category 1A |
|--------------------|--------------------------------|

GHS Label elements, including precautionary statements



Signal word

Warning

Hazard statements

May cause an allergic skin reaction

Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves/protective clothing/eye protection/face protection

Skin

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Take off contaminated clothing and wash it before reuse

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards which do not result in classification

No information available

General Hazards

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

Not applicable

Mixture

| Chemical Name | CAS-No | Weight % |
|--------------------------------|------------|---------------|
| Glycerol (glycerin, glycerine) | 56-81-5 | 20 - <50 |
| Tris | 77-86-1 | 1 |
| BSA | 9048-46-8 | 1 |
| CMIT/MIT 3:1 | 55965-84-9 | 0.025 - <0.05 |

4. FIRST AID MEASURES**Description of first aid measures**

| | |
|-----------------------|--|
| General advice | Show this safety data sheet to the doctor in attendance. |
| Inhalation | Remove to fresh air and keep at rest in a position comfortable for breathing. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction. If symptoms persist, call a physician. |
| Eye contact | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel. |
| Ingestion | Clean mouth with water and afterwards drink plenty of water. Do NOT induce vomiting. |

Most important symptoms and effects, both acute and delayed

| | |
|-----------------|--|
| Symptoms | Itching. Rashes. Hives. The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. |
|-----------------|--|

Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors In the event of fire and/or explosion do not breathe fumes May cause sensitization by inhalation and skin contact.

Special protective actions 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

Use personal protective equipment. Avoid contact with the skin and the eyes. For personal protection see section 8.

Environmental precautions

Try to prevent the material from entering drains or water courses. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take Of contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage conditions

Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

| Chemical name | China | Japan Society of Occupational Health | OEL | Australia | Taiwan |
|---|-------|--------------------------------------|----------------------------|----------------------|--------|
| CMIT/MIT 3:1 55965-84-9 | - | - | TWA: 0.1 mg/m ³ | - | - |
| Glycerol (glycerin, glycerine) 56-81-5 | - | - | TWA: 10 mg/m ³ | 10 mg/m ³ | - |

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipmen

Personal protective equipment (PPE) needs to be selected depending on the implemented engineering controls, frequency/duration of work activities and the concentrations of the hazardous substance.

| | |
|---------------------------------------|--|
| Eye/face protection | Use suitable eye protection |
| Skin and body protection | Wear suitable protective clothing |
| Hand protection | Wear suitable gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. |
| Respiratory protection | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators |
| General hygiene considerations | Handle in accordance with good industrial hygiene and safety practice. |

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|-----------------------|------------------|-----------------------|--------------------------|
| Physical state | Liquid | | |
| Appearance | aqueous solution | Odor | No information available |
| Color | colorless | Odor threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--|----------------------|--------------------------------|
| Melting point / freezing point | No data available | None known |
| Boiling point / boiling range | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Flash point | No data available | |
| Autoignition temperature | No data available | |
| Decomposition temperature | | |
| pH | No data available | |
| pH (as aqueous solution) | No data available | No information available |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |
| Water solubility | No data available | None known |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Vapor pressure | No data available | None known |
| Relative density | No data available | None known |
| Bulk density | No data available | |
| Liquid Density | No data available | |
| Vapor density | No data available | None known |
| Particle characteristic | | |
| Particle Size | No data available | |
| Particle Size Distribution | No data available | |

Other information

| | |
|-----------------------------|--------------------------|
| Oxidizing properties | No information available |
| Explosive properties | No information available |

10. STABILITY AND REACTIVITY

| | |
|---|---|
| <u>Reactivity</u> | |
| Reactivity | No information available. |
| <u>Chemical stability</u> | |
| Stability | Stable under normal conditions. |
| <u>Explosion data</u> | |
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge | None. |
| <u>Possibility of hazardous reactions</u> | |
| Possibility of hazardous reactions | None under normal processing. |
| <u>Conditions to avoid</u> | |
| Conditions to avoid | None known based on information supplied. |
| <u>Incompatible materials</u> | |
| Incompatible materials | None known based on information supplied. |
| <u>Hazardous decomposition products</u> | |
| Hazardous decomposition products | None known based on information supplied. |

11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure

Product Information

| | |
|--------------|---|
| Inhalation | Specific test data for the substance or mixture is not available. |
| Eye contact | Specific test data for the substance or mixture is not available. |
| Skin contact | May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). |
| Ingestion | Specific test data for the substance or mixture is not available. |
| Symptoms | Itching. Rashes. Hives. |

Numerical measures of toxicity

Acute toxicity

| | |
|------------------------|--------------------------|
| Unknown acute toxicity | No information available |
|------------------------|--------------------------|

Component Information

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------------------------|----------------------|------------------------|-----------------|
| Glycerol (glycerin, glycerine) | 12,600 mg/kg (Rat) | Rabbit - >10,000 mg/kg | |
| Tris | 5900 mg/kg (Rat) | | |
| CMIT/MIT 3:1 | 53 mg/kg (Rat) | | |

Delayed and immediate effects and also chronic effects from short and long term exposure

| | |
|-----------------------------------|--|
| Skin corrosion/irritation | No information available |
| Serious eye damage/irritation | No information available |
| Respiratory or skin sensitization | May cause sensitization by skin contact. |
| Germ cell mutagenicity | No information available |
| Carcinogenicity | No information available |
| Reproductive toxicity | No information available |

| | |
|--------------------------|--------------------------|
| STOT - single exposure | No information available |
| STOT - repeated exposure | No information available |
| Aspiration hazard | No information available |

12. ECOLOGICAL INFORMATION

Toxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods

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

14. TRANSPORT INFORMATION

| | |
|--|---|
| IMDG | Not regulated |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | No information available |
| ICAO (air) | Not regulated |
| IATA | Not regulated |
| DOT | Not regulated |
| TDG | Not regulated |
| Special precautions for user | Special provisions from the regulations relative to the specified mode of transport are noted by numeric code. Refer to the regulations for the full text of special provisions. |

15. REGULATORY INFORMATION

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

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

| | |
|---------------|-----------------|
| TSCA | Does not comply |
| DSL/NDSL | Does not comply |
| EINECS/ELINCS | Does not comply |
| ENCS | Does not comply |
| IECSC | Does not comply |
| KECL | Does not comply |
| PICCS | Does not comply |
| AICS | Does not comply |

| Chemical name | TSCA | DSL | NDSL | EINECS | ELINCS |
|---------------|------|-----|------|--------|--------|
| CMIT/MIT 3:1 | - | X | - | - | - |

| Chemical name | ENCS | IECSC | KECL | PICCS | AICS |
|---------------|------|-------|------|-------|------|
| CMIT/MIT 3:1 | X | X | X | X | - |

Legend: X - Listed

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

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

16. OTHER INFORMATION

| | |
|---------------|---|
| Issuing Date | 10- Apr-2022 |
| Revision date | 10- Apr-2022 |
| Revision Note | The symbol (*) in the margin of this SDS indicates that this line has been revised. |

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

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.