



Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Product name: Positive control for anti-LC3 antibody

SDS NO : PM036_PN_E-1

Product code: PM036-PN

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

Relevant identified uses of the product: Research and Development

Uses advised against: Ask for the judgment of an expert when using for purposes other than recommended uses.

1.3 Details of the supplier of the safety data sheet

Supplier: Medical & Biological Laboratories Co., Ltd.

Address: 1018-1 Terasawaoka, Ina-shi, Nagano-ken 396-0002, Japan

Division: SDS Support

Telephone number: +81-265-76-1777

e-mail address: sds-support@mbl.co.jp

1.4 Emergency telephone number: +81-265-76-1777 (Monday to Friday, 9 AM to 5 PM JST)

Section 2. Hazards identification

GHS classification and label elements of the product

2.1 Classification of the substance or mixture

Classification according to the OSHA Hazard Communication Standard (29 CFR 1910.1200)

HEALTH HAZARDS

Acute toxicity (Oral): Category 4

Acute toxicity (Dermal): Category 3

Serious eye damage/eye irritation: Category 2

Specific target organ toxicity – single exposure: Category 2 (central nervous system)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment, long-term (chronic): Category 2

(Note) GHS classification without description: Not classified/Classification not possible

2.2 Label elements

Labelling according to the OSHA Hazard Communication Standard (29 CFR 1910.1200)



Signal word: Danger

HAZARD STATEMENT

H302-Harmful if swallowed

H311-Toxic in contact with skin

H319-Causes serious eye irritation

H371-May cause damage to organs (central nervous system)

H411-Toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

P273-Avoid release to the environment.

P260-Do not breathe dust/fume/gas/mist/vapors/spray.

P264-Wash contaminated parts thoroughly after handling.

P280-Wear protective gloves or protective clothing.

P280-Wear eye protection/face protection.

Positive control for anti-LC3 antibody

P270–Do not eat, drink or smoke when using this product.

Response

P391–Collect spillage.

P321–Specific treatment is required.

P312–Call a POISON CENTER/doctor/physician if you feel unwell.

P308 + P311–IF exposed or concerned: Call a POISON CENTER/doctor/physician.

P302 + P352–IF ON SKIN: Wash with plenty of soap and water.

P361 + P364–Take off immediately all contaminated clothing and wash it before reuse.

P305 + P351 + P338–IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313–If eye irritation persists: Get medical advice/attention.

P330–Rinse mouth.

P301 + P312–IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.

Storage

P405–Store locked up.

Disposal

P501–Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

The product does not contain any ingredients designated as PBT and/or vPvB.

The product does not contain any ingredients designated as Endocrine disrupting properties.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

3.2 Mixture

Ingredient name	Content (%)	CAS No.	EC No.	Classification according to REGULATION (EC) No.1272/2008 [CLP]
2-Mercaptoethanol	5.00	60-24-2	200-464-6	–
Sodium Lauryl Sulfate	2.00	151-21-3	205-788-1	–
Glycerin	10.00	56-81-5	200-289-5	–
Water	83.00<	7732-18-5	231-791-2	–

Components contributing to the hazard

The product does not contain any ingredients listed in REACH SVHC candidate list.

Section 4. First-aid measures

4.1 Descriptions of first-aid measures

General measures

P314–Get medical advice/attention if you feel unwell.

P312–Call a POISON CENTER/doctor/physician if you feel unwell.

P308 + P311–IF exposed or concerned: Call a POISON CENTER/doctor/physician.

IF INHALED

P304 + P312–IF INHALED: Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

P302 + P352–Wash with plenty of soap and water.

P312–Call a POISON CENTER/doctor/physician if you feel unwell.

IF IN EYES

P305 + P351 + P338–Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313–If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Positive control for anti-LC3 antibody

P330–Rinse mouth.

P301 + P312–IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptom and effect are unknown.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

P321–Specific treatment is required.

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

5.3 Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

P280–Wear protective gloves/protective clothing/eye protection/face protection.

Section 6. Accidental release measures

6.1 Personnel precautions, protective equipment and emergency procedures

Stop leak if safe to do so.

6.2 Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

6.3 Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, etc.), then place in a chemical waste container.

Preventive measures for secondary accident

P391–Collect spillage.

P376–Stop leak if safe to do so.

Stop leak if you can do it without risk.

Prevent entry into waterways, sewers, basements or confined areas.

6.4 Reference to other sections

Refer to section 13

Section 7. Handling and storage

7.1 Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

P260–Do not breathe dust/fume/gas/mist/vapors/spray.

Safety Measures

P280–Wear protective gloves/protective clothing/eye protection/face protection.

P280–Wear protective gloves or protective clothing.

P280–Wear eye protection/face protection.

Any incompatibilities data is not available.

Advice on general occupational hygiene

P264–Wash contaminated parts thoroughly after handling.

P270–Do not eat, drink or smoke when using this product.

P361 + P364–Take off immediately all contaminated clothing and wash it before reuse.

7.2 Storage

Positive control for anti-LC3 antibody

Conditions for safe storage

- P233–Keep container tightly closed.
- P235 + P410–Keep cool. Protect from sunlight.
- P401–Store in accordance with local/national regulation.
- P405–Store locked up.

Container and packaging materials for safe handling

- P234–Keep only in original packaging.

7.3 Specific end use(s)

- For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limit

ACGIH

- Not established

EU Occupational exposure limit values (Workplace Exposure limits) compliant to relevant EU Directive through 91/332/EEC to 2019/1831/EU

- Not established

OSHA–PEL

(Glycerin)

TWA: 15mg/m³ (Total dust)

TWA: 5mg/m³ (Respirable fraction)

NIOSH–REL

(Glycerin)

See Appendix D

Derived No–Effect Level (DNEL)

- No DNELs available.

Predicted No–Effect Concentrations (PNEC)

- No PNECs available.

8.2 Exposure controls

Appropriate engineering controls

- Do not use in areas without adequate ventilation.
- Washing facilities should be available.

Individual protection measures

Hand protection

- Wear protective gloves.

Eye protection

- Wear eye/face protection.

Skin and body protection

- Wear protective clothing.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state: Liquid

Color: pale blue

Odor data is not available.

Odor threshold data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability data is not available.

Positive control for anti-LC3 antibody

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH: 7.2

Kinematic viscosity data is not available.

Solubility:

Solubility in water data is not available.

Solubility in solvent data is not available.

Partition coefficient n-octanol/water data is not available.

Vapor pressure data is not available.

Density and/or relative density data is not available.

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

9.2 Other information

Other information is not available.

Section 10. Stability and Reactivity

10.1 Reactivity

Reactivity data is not available.

10.2 Chemical stability

Stable under normal storage/handling conditions.

10.3 Possibility of hazardous reactions

Possibility of hazardous reactions data is not available.

10.4 Conditions to avoid

Conditions to avoid data is not available.

10.5 Incompatible materials

Incompatible materials data is not available.

10.6 Hazardous decomposition products

Hazardous decomposition products data is not available.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation data is not available.

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Teratogenic effects data is not available.

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure data is not available.

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

11.2 Information on other hazards

Endocrine disrupting properties is not available.

Section 12. Ecological Information

12.1 Toxicity

Positive control for anti-LC3 antibody

Toxicity data is not available.

Water solubility

(2-Mercaptoethanol)

miscible (source: ICSC, 1997)

(Sodium Lauryl Sulfate)

15 g/100 mL (20°C) (source: ICSC, 2008)

(Glycerin)

miscible (source: ICSC, 2006)

12.2 Persistence and degradability

(2-Mercaptoethanol)

Not rapidly degradable (source: NITE)

(Sodium Lauryl Sulfate)

Rapidly degradable (Degradation rate: 85% (by BOD); 99.3% (by TOC)) (source: NITE)

12.3 Bioaccumulative potential

(2-Mercaptoethanol)

log Pow: -0.3 (source: ICSC, 1997)

(Sodium Lauryl Sulfate)

log Pow: 1.6 (source: ICSC, 2008)

(Glycerin)

log Pow: -1.76 (source: ICSC, 2006)

12.4 Mobility in soil

Mobility in soil data is not available.

12.5 Results of PBT and vPvB assessment

PBT and/or vPvB assessment data is not available.

12.6 Endocrine disrupting properties

Endocrine disrupting properties is not available.

12.7 Other adverse effects

PMT and/or vPvM assessment data is not available.

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

13.1 Waste treatment methods

P273-Avoid release to the environment.

P501-Dispose of contents/container in accordance with local/national regulation.

Contaminated packing

Dispose of container after using the contents completely.

Section 14. Transport Information

UN No., UN CLASS

14.1 UN Number or ID Number : 3082

14.2 UN Proper Shipping Name :

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

14.3 Class or division (Transport hazard class) : 9

14.4 Packing group : III

ERG GUIDE No.: 171

Special provisions No.: 274; 331; 335; 375

Limited quantities (upper limit) : 5L

Excepted quantities (maximum net quantity) : E1

Packing (P) instructions : P001

Spacial packing (PP) provisions : PP1

Positive control for anti-LC3 antibody

IBCs (IBC) packing instructions : IBC03
 IBCs (LP) packing instructions : LP01
 Portable tanks (T) instructions : T4
 Portable tanks (TP) special provisions : TP1; TP29

ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)

14.1 UN Number or ID Number : 3082
 14.2 UN Proper Shipping Name :
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 14.3 Class or division (Transport hazard class) : 9
 Label : 9
 14.4 Packing group : III
 Special provisions : 274; 335; 375; 601

ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

14.1 UN Number or ID Number : 3082
 14.2 UN Proper Shipping Name :
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 14.3 Class or division (Transport hazard class) : 9
 Label : 9
 14.4 Packing group : III
 Special provisions : 274; 335; 375; 601; 650

RID (Regulation concerning the International Carriage of Dangerous goods by Rail)

14.1 UN Number or ID Number : 3082
 14.2 UN Proper Shipping Name :
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 14.3 Class or division (Transport hazard class) : 9
 Label : 9
 14.4 Packing group : III
 Special provisions : 274; 335; 375; 601; 650

IMDG Code (International Maritime Dangerous Goods Regulations)

14.1 UN Number or ID Number : 3082
 14.2 UN Proper Shipping Name :
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 14.3 Class or division (Transport hazard class) : 9
 14.4 Packing group : III
 Special provisions No.: 274; 335; 375; 969

IATA (Dangerous Goods Regulations)

14.1 UN Number or ID Number : 3082
 14.2 UN Proper Shipping Name :
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 14.3 Class or division (Transport hazard class) : 9
 Hazard labels : Miscellaneous & Environmentally hazardous
 14.4 Packing group : III
 Special provisions No.: A97; A158; A197; A215

14.5 Environmental hazards

Marine pollutants (yes/no) : yes

14.6 Special precautions for user

Special precautions for user is not applicable.

14.7 Maritime transport in bulk according to IMO instruments

MARPOL Annex II – Noxious Liquid Substances

Noxious Liquid Substances ; Cat. Y equiv.

2-Mercaptoethanol

Noxious Liquid Substances ; Cat. Z

Glycerin

Positive control for anti-LC3 antibody

Non Noxious Liquid Substances ; Cat. OS

Water

MARPOL Annex V – HME (Harmful to the Marine Environment)

Hazardous to the aquatic environment – short-term (acute): cat.1

2-Mercaptoethanol; Sodium Lauryl Sulfate

Hazardous to the aquatic environment – long-term (chronic): cat.1, 2

2-Mercaptoethanol

Section 15. Regulatory Information

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

The product does not contain any ingredients listed in REACH SVHC candidate list.

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Glycerin; 2-Mercaptoethanol; Sodium Lauryl Sulfate; Water

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

Section 16. Other information

GHS classification and labelling

H302–Acute toxicity, Category 4: H302 Harmful if swallowed

H311–Acute toxicity, Category 3: H311 Toxic in contact with skin

H319–Serious eye damage/eye irritation, Category 2: H319 Causes serious eye irritation

H371–STOT – single exposure, Category 2: H371 May cause damage to organs

H411–Hazardous to the aquatic environment, long-term (chronic), Category 2: H411 Toxic to aquatic life with long lasting effects

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 23rd edit., 2023 UN
IMDG Code, 2024 Edition (Incorporating Amendment 42–24)

IATA Dangerous Goods Regulations (66th Edition) 2025

2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2025 TLVs and BEIs. (ACGIH)

Supplier's data/information

OSHA Hazard Communication Standard – 2024 (29 CFR 1910.1200)

Chemicals safety data management system "GHS Assistant" Version 4.35

(<https://www.asahi-ghs.com/>)

Revision information

First edition

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.