

Issuing Date: 2023-11-20

Version: 1

1. Identification

A. Product identifier

Product name Phospho-Akt (Ser473) Antibody**Product Code(s)** 9271

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

Identified uses For Research Use Only. Not for Use in Diagnostic Procedures.**Uses advised against** No information available

C. Supplier's details

Manufacturer

Cell Signaling Technology, Inc.
3 Trask Lane
Danvers, MA 01923
United States
TEL: +1 978 867 2300
FAX: +1 978 867 2400

Supplier

Seoulin Bioscience Co., Ltd.
경기도 성남시 분당구 대왕판교로 700
TEL: 1670-5911
E-mail: support@seoulin.co.kr

Supplier

Koram Biotech Co., Ltd.
서울시 강남구 선릉로76길 4
TEL: 02-556-0311
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Emergency telephone number **CHEMTREC** 24 hours a day, 7 days a week, 365 days a year
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080-880-0468

2. Hazard(s) identification

A. Classification of the substance or mixture

The product contains no substances which at their given concentration, are considered to be hazardous to health

B. GHS Label elements, including precautionary statements

Signal Word

None

Hazard Statements

None

C. Other hazards which do not result in classification

Not applicable

3. Composition/information on ingredients

Chemical nature Mixture

General Hazards The product contains no substances which at their given concentration, are considered to be hazardous to health.

| Chemical name | CAS No | Weight-% | Other information |
|---------------|---------|----------|-------------------|
| glycerol | 56-81-5 | 30-60 | - |

4. First-aid measures

A. In case of eye contact Rinse thoroughly with plenty of water, also under the eyelids.

B. In case of skin contact Wash skin with soap and water.

C. In case of inhalation Move to fresh air.

D. In case of ingestion Clean mouth with water and afterwards drink plenty of water.

E. Indication of immediate medical attention and special treatment needed, if necessary

Note to physicians Treat symptomatically.

Symptoms No information available.

5. Fire-fighting measures

A. Suitable (and unsuitable) extinguishing media

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

Unsuitable Extinguishing Media No information available.

B. Specific hazards arising from the chemical No information available

C. Special Protective Equipment for Firefighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

B. Environmental precautions See Section 12 for additional Ecological Information.

C. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

A. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use.

B. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

8. Exposure controls/personal protection

A. Control Parameters

Occupational exposure limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| Chemical name | Korea | ACGIH TLV |
|---------------|--------------------------|-----------|
| glycerol | TWA 10 mg/m ³ | |

B. Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Environmental exposure controls No information available.

C. Personal Protective Equipment

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment.

Eye protection Tight sealing safety goggles.

Hand protection Impervious gloves.

Body protection Wear suitable protective clothing.

9. Physical and chemical properties

Information on basic physical and chemical properties

A. Appearance Clear

| | | |
|--|---------------------------|--------------------------|
| Physical State | Liquid | |
| color | Colorless | |
| B. Odor | No information available | |
| C. Odor Threshold | No information available | |
| Property | Values | Remarks • Method |
| D. pH | 7.5 | @ 20 °C |
| E. Melting point/freezing point | No information available | None known |
| F. Initial boiling point and boiling range | No information available | None known |
| G. Flash point | No information available | None known |
| H. Evaporation rate | No information available | None known |
| I. Flammability | No information available | None known |
| J. Upper/lower flammability or explosive limits | | |
| Upper flammability limit | No information available. | No information available |
| Lower flammability limit | No information available. | No information available |
| K. Vapor pressure | No information available | None known |
| L. Solubility(ies) | | |
| Solubility | No information available. | None known |
| Solubility in other solvents | No information available | None known |
| M. Relative vapor density | No information available | None known |
| N. Specific Gravity | No information available | None known |
| O. Partition coefficient: n-octanol/water | No information available | None known |
| P. Autoignition Point | No information available | None known |
| Q. Decomposition temperature | No information available | None known |
| R. Viscosity | | |
| Viscosity | No information available | None known |
| Viscosity, dynamic | No information available | None known |
| S. Molecular Weight | No information available | |
| Other information | | |
| Explosive properties | No information available | |
| Oxidizing properties | No information available | |
| Softening point | No information available | |
| VOC content | No information available | |
| Liquid Density | No information available | |

10. Stability and reactivity

A. Chemical stability and possibility of hazardous reactions

Stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Explosion Data

Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

B. Conditions to Avoid Extremes of temperature and direct sunlight.

C. Incompatible products No information available.

D. Hazardous Decomposition Products None known based on information supplied.

11. Toxicological information

A. Information on the likely routes of exposure

Product Information

| | |
|---------------------|---|
| Inhalation | Avoid breathing vapors or mists. |
| Ingestion | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
| Eye contact | Avoid contact with eyes. |
| Skin contact | Avoid contact with skin. |
| Symptoms | No information available. |

B. Health hazards information

Numerical measures of toxicity No information available

| Chemical name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---------------|---------------------|--------------------|-----------------------------------|
| glycerol | = 12600 mg/kg (Rat) | > 10 g/kg (Rabbit) | > 570 mg/m ³ (Rat) 1 h |

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available

Sensitization No information available

Carcinogenicity No information available.

Mutagenic effects No information available

Reproductive toxicity No information available.

Specific target organ toxicity (STOT) – single exposure No information available

Specific target organ toxicity (STOT) – repeated exposure No information available

Target Organ Effects No information available.

Aspiration hazard No information available.

12. Ecological information

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

| Chemical name | Toxicity to algae | Toxicity to fish | Toxicity to microorganisms | Toxicity to daphnia and other aquatic invertebrates |
|---------------|-------------------|--|----------------------------|---|
| glycerol | - | LC50 51 - 57 mL/L (Oncorhynchus mykiss) 96 h | - | EC50 500 mg/L (Daphnia magna) 24 h |

B. Persistence and degradability No information available.

C. Bioaccumulative potential

| Chemical name | Octanol-Water Partition Coefficient |
|---------------|-------------------------------------|
| glycerol | -1.76 |

D. Mobility in soil No information available.

E. Other adverse effects No information available.

13. Disposal considerations

A. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

B. Disposal considerations

Contaminated packaging Do not reuse empty containers.

14. Transport information

A. UN number Not regulated
B. UN proper shipping name Not regulated
C. Transport hazard class(es) Not regulated
D. Packing group Not regulated
E. Marine Pollutant Not regulated
F. Special precautions for user No information available

15. Regulatory information

A. Industrial Safety and Health Law Not applicable

Harmful substances subject to control Not applicable

Harmful agents subject to work environment monitoring Not applicable

Harmful agents subject to workers requiring health examination Not applicable

B. Chemicals Control Act not applicable

Chemicals Control Act (CCA) - Accident Precaution Chemicals Not applicable

C. Safety Control of Dangerous Substances Act No information available

D. Wastes Management Dispose of waste in accordance with environmental legislation.

E. Other Regulations No information available

International inventories

TSCA 8(b) Contact supplier for inventory compliance status.
DSL/NDSL Contact supplier for inventory compliance status.

| | |
|---------------|---|
| EINECS/ELINCS | Contact supplier for inventory compliance status. |
| ENCS | Contact supplier for inventory compliance status. |
| IECSC | Contact supplier for inventory compliance status. |
| KECL | Contact supplier for inventory compliance status. |
| PICCS | Contact supplier for inventory compliance status. |
| AICS | Contact supplier for inventory compliance status. |

TSCA - *United States Toxic Substances Control Act Section 8(b) Inventory*
 DSL/NDL - *Canadian Domestic Substances List/Non-Domestic Substances List*
 EINECS/ELINCS - *European Inventory of Existing Commercial Chemical Substances/EU 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

A. Information source and references

Prepared By No information available.

B. Issuing Date: 2023-11-20

C. Revision number and date

Version: 1

D. Other information .

Key or legend to abbreviations and acronyms used in the safety data sheet

IMDG International Maritime Dangerous Goods (IMDG)

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|----------|-----------------------|-------|---------------------------|
| TWA: | Time weighted average | STEL: | Short term exposure limit |
| Ceiling: | Maximum limit value: | * | Skin designation |

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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End of Safety Data Sheet