

SAFETY DATA SHEET

Cat# K242-3-25, Active Recombinant Caspases-Group II

SDS DATE: 3June2015

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Active Recombinant Caspases-Group II
PRODUCT CODES: Cat# K242-3-25
MANUFACTURER: BioVision, Inc.
DIVISION:
ADDRESS: 155 S. Milpitas Blvd. Milpitas, CA 95035
EMERGENCY PHONE: 858-373-8066
CHEMTREC PHONE:
OTHER CALLS: 408-493-1800
FAX PHONE: 408-493-1801

SECTION 2: HAZARDS IDENTIFICATION

Component	Description	Volume	Safety Information
Recombinant Caspase-2	contains ammonium sulfate	25 units	See below
Recombinant Caspase-3	contains ammonium sulfate	25 units	See below
Recombinant Caspase-7	contains ammonium sulfate	25 units	See below

Ammonium sulfate:

Emergency Overview

OSHA Hazards: Harmful by ingestion

GHS Classification: Acute aquatic toxicity (Category 3)
Chronic aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram: none

Signal word: none

Hazard statement(s): H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s): P273 Avoid release to the environment.

P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard: 1

Flammability: 0

Physical hazards: 0

NFPA Rating

Health hazard: 0

Fire: 0

Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Skin: May be harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Ingestion: Harmful if swallowed.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula
Ammonium sulfate	7783-20-2	231-984-1	132.14	(NH ₄) ₂ SO ₄

SECTION 4: FIRST AID MEASURES

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media: For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products: Hazardous decomposition products formed under fire conditions – see section 10.

Further information: Use water spray to cool unopened containers.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

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

Recommended storage temperature: -80°C.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Ammonium sulfate
Appearance:	Crystalline solid
pH:	5-6 at 132 g/l
Water Solubility:	Completely soluble
Other Solubility:	No data available
Boiling Point (°C):	No data available
Melting Point (°C):	>280 °C (>536 °F)
Flash Point (°C):	No data available
Ignition Temperature (°C):	No data available
Density:	1.77 g/cm ³

SECTION 10: STABILITY AND REACTIVITY

Property	Ammonium sulfate
Chemical stability:	Stable under recommended storage conditions
Conditions to avoid:	No data available
Materials to avoid:	Strong oxidizing agents, strong bases
Hazardous decomposition products:	Nitrogen oxides, sulfur oxides

SECTION 11: TOXICOLOGICAL INFORMATION

Ammonium sulfate:

Acute toxicity: no data available

Skin corrosion/irritation: Skin – rabbit – no skin irritation

Skin – human – mild skin irritation

Serious eye damage/eye irritation: Eyes – rabbit – no skin irritation

Skin – human – mild eye irritation

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Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity – single exposure (GHS): no data available

Specific target organ toxicity – repeated exposure (GHS): no data available

Potential Health Effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Skin: May be harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Ingestion: Harmful if swallowed.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional information: RTECS: BS4500000

SECTION 12: ECOLOGICAL INFORMATION

Ammonium sulfate:

Persistence and degradability: no data available

Toxicity: Toxicity to fish: LC50 – Oncorhynchus mykiss (rainbow trout) – 36.7 mg/l – 96 h

Toxicity to daphnia and other aquatic invertebrates: LC50 – Daphnia magna (Water flea) – 433 mg/l – 50 h

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

Product: Observe all federal, state, and local environmental regulations.

Contaminated packaging: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

Ammonium sulfate:

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

SECTION 15: REGULATORY INFORMATION

OSHA Hazards: Ammonium sulfate; Harmful by ingestion

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313:

Ammonium sulfate, CAS-No. 7783-20-2; Revision Date: 1993-04-24

SARA 311/312 Hazards: Ammonium sulfate, & DMPPDA; Acute Health Hazard

Massachusetts Right To Know Components: Ammonium sulfate, CAS-No. 7783-20-2; Revision Date: 1993-04-24

Pennsylvania Right To Know Components: Ammonium sulfate, CAS-No. 7783-20-2; Revision Date: 1993-04-24

New Jersey Right To Know Components: Ammonium sulfate, CAS-No. 7783-20-2; Revision Date: 1993-04-24

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

EU regulations

Component	Risk Phrases	Safety Phrases
Ammonium sulfate	R22	S26

SECTION 16: OTHER INFORMATION

DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.