



BMA BIOMEDICALS

SAFETY DATA SHEET

Revision Date 04.12.2025

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identification

Product Name: anti-Leu-Enkephalin -
diluted rabbit antiserum, lyophilized
Product Code: T-4288
CAS-No.: N/A; mixture

1.2. Recommended use and Restrictions on use

Laboratory reagent, Research Use Only

1.3. Company Identification

Chemoforma AG
Division BMA Biomedicals
Rheinstrasse 28 - 32
CH - 4302 Augst
Switzerland

Telephone: +41 61 811 6222
Fax: +41 61 811 6006
Email: msds@bma.ch

1.4. Emergency telephone

+41 61 811 6222 (8:30 am - 5 pm CET)
+41 44 281 5151 (Tox-Zentrum Schweiz)
145 (Tox Info Suisse)

2. HAZARD(S) IDENTIFICATION

2.1. Classification of the mixture

GHS-US Classification in accordance with 29 CFR 1910 (OSHA HCS)

Toxic if swallowed, H301
Harmful if swallowed, H302
Fatal in contact with skin, H310
Fatal if inhaled, H330
May cause damage to organs through prolonged or repeated exposure, H373
Very toxic to aquatic life, H400
Very toxic to aquatic life with long lasting effects, H410

2.2. GHS Label elements, including precautionary statements



Hazard Pictogram:

Signal Word: Danger

Hazard statements:

H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.

Precautionary statements:



BMA BIOMEDICALS

P264	Wash exposed skin thoroughly after handling.
P280	Wear protective gloves, protective clothing, eye protection, face protection.
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.

2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

Harmful by inhalation, ingestion, or skin absorption.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable

3.2 Mixture:

Principal Components	Concentration	CAS No	GHS-US Classification
Sodium Phosphate monobasic monohydrate	10.8% w/w lyophilized reagents powder	10049-21-5	Not classified
Sodium Phosphate dibasic anhydrous	47.3% w/w lyophilized reagents powder	7558-79-4	Not classified
BSA; Bovine Serum Albumin	41.1% w/w lyophilized reagents powder	9048-46-8	Acute Tox. 4, H302
Thimerosal	0.73% w/w lyophilized reagents powder	54-64-8	Acute Tox. 3, H301; Acute Tox. 1, H310; Acute Tox. 2, H330; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST-AID MEASURES

4.1 Description of First Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation: Supply fresh air breathing. If not breathing, give artificial respiration. Consult a physician.

Ingestion: Rinse mouth with water. Consult a poison center or physician.

In case of skin contact: Immediately remove all contaminated clothing. Wash 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. Consult a poison center or physician.

4.2 Important Symptoms/Effects, acute and delayed

See section 2.2.

4.3 Required treatment

Obtain medical assistance.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing agents



BMA BIOMEDICALS

Suitable extinguishing agents: Use water spray, alcohol resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing agents: Do not use a heavy water stream.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Sulfur oxides, sodium oxides, mercury/mercury oxides.

5.3 Advice for firefighters

Protective equipment: Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear respiratory protection, safety glasses, gloves, protective clothing including a full length lab coat (see section 8). Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Ensure adequate ventilation. Evacuate unnecessary personnel to safe areas. Avoid breathing dust. Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

6.2 Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Notify authorities if liquid enters sewers or public waters.

6.3 Methods and material for containment and cleanup: Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Blot spills with inert solids, such as sand, clay, diatomaceous earth, acid binders, universal binders, or sawdust as soon as possible. Collect spillage and absorbent material and place in closed container, store away from other materials, for proper disposal. Wash spill site thoroughly and discard contaminated cleanup items in closed container for proper disposal.

6.4 Disposal: Dispose in accordance with local regulation.

6.5 References to other sections

See Section 8 Exposure Controls and personal protection.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling and hygiene

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation in work area to prevent vapor buildup. Do not breathe dust, mist, vapors, spray. Wash hands and other exposed skin with mild soap and water before eating, drinking, or smoking and when leaving work. Wash contaminated clothing before reusing. See precautions section 2.2.

7.2 Conditions for safe storage, and incompatibilities

Technical measures: Comply with applicable regulations.

Storage conditions: Keep container closed when not in use, in a dry and well-ventilated place

7.3 Specific end use(s)

Apart from uses listed in Section 1.3, no other specific uses are stipulated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Components with workplace control parameters:



BMA BIOMEDICALS

Component	CAS-No.	Value	Control parameters	Basis
Thimerosal	54-64-8	TWA	0.050000 mg/m ³	USA. NIOSH Recommended Exposure Limits
	Remarks	Potential for dermal absorption		
		C	0.100000 mg/m ³	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		TWA	0.100000 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Kidney damage Danger of cutaneous absorption varies		
		TWA	0.0100000 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Kidney damage Peripheral Nervous System impairment Danger of cutaneous absorption varies		
		STEL	0.030000 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Kidney damage Peripheral Nervous System impairment Danger of cutaneous absorption varies		

8.2 Exposure Controls

Appropriate engineering controls: Avoid contact with skin, eyes, and clothing. General industrial hygiene practice. Wash hands before breaks and immediately after handling the product.

Personal protective equipment: Avoid all unnecessary exposure by using the following equipment:

Hand protection: Handle with gloves, use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection: Wear suitable protective clothing, such as a laboratory coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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).

Other information: Do not eat, drink, or smoke during use.

Control of environmental exposure : Prevent further leakage and spillage if safe to do so. Do not let product enter drains. Discharge into the environment should be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Lyophilized reagents: white powder Reconstituted reagents: clear, colorless solution
Odor:	No data available
Odor threshold:	No data available
pH:	No data available
Relative evaporation rate:	No data available
Melting point:	No data available



BMA BIOMEDICALS

Freezing point:	No data available
Boiling point:	No data available
Flash point:	No data available
Self-ignition temperature:	No data available
Decomposition temperature:	No data available
Flammability (solid, gas):	No data available
Vapor Pressure:	No data available
Relative vapor density at 20C:	No data available
Relative density:	No data available
Density:	No data available
Solubility:	Soluble in water
Log Pow:	No data available
Log Kow:	No data available
Viscosity, kinematic:	No data available
Viscosity, dynamic:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available
Explosive limits:	No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

10.6 Hazardous decomposition products

Other decomposition products - No data available.

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD₅₀ Oral - rat - no data available

LD₅₀ Oral - rat - 75 mg/kg (thimerosal)

LD₅₀ Subcutaneous - rat - no data available

Inhalation: No data available.

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Nutritional and Gross Metabolic: changes in metabolic acidosis. (thimerosal)

Behavioral: Ataxia.

LD₅₀ Subcutaneous - rat - 98 mg/kg (thimerosal)

Skin corrosion

No data available (thimerosal). May cause skin irritation (sodium phosphate dibasic anhydrous).

Serious eye damage/irritation



BMA BIOMEDICALS

Eyes - rabbit

Result: mild eye irritation.

Respiratory or skin sensitization

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Germ cell mutagenicity

Hamster

Lungs

Micronucleus test

Mouse

Micronucleus test

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.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as 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 carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available.

Specific target organ toxicity (single exposure)

No data available.

Specific target organ toxicity (repeated exposure)

No data available.

Aspiration hazard

No data available.

11.2 Additional information

RTECS: Not available.

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

12. ECOLOGICAL INFORMATION

No adverse reactions known when used according to intended use.

13. DISPOSAL CONSIDERATIONS

Consult local, state or national regulations for proper disposal. When disposing of liquid components, flush drain with sufficient water. Dispose of package according to instructions of public authorities.

14. TRANSPORTATION INFORMATION

Road / Railway Haulage ADR/RID: Not restricted.

Sea Freight IMO (IMDG): Not restricted.

Air Freight IATA (ICAO): Not restricted.

UN Number: Not applicable.

15. REGULATORY INFORMATION

BMA BIOMEDICALS, Rheinstrasse 28-32, CH-4302 Augst (Switzerland)

Phone: +41 61 811 6222, info@bma.ch, www.bma.ch



BMA BIOMEDICALS

Observe the general safety regulations when handling chemicals. No single component contains a hazardous ingredient in an amount that requires identification and labeling.

Canadian lists:

CEPA Toxic substances: None of the components are listed.

Canadian ARET: None of the components are listed.

Canadian NPRI: None of the components are listed.

Alberta Designated Substances: None of the components are listed.

Ontario Designated Substances: None of the components are listed.

Quebec Designated Substances: None of the components are listed.

WHMIS (Canada): Not controlled under WHMIS (Canada)

Canada inventory : Canada inventory: All components are listed or exempted.

EU regulations:

This product is not classified according to the EU regulations 1272/2008. No labeling requirement.

International regulations:

International lists:

Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Korea inventory (KECI): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Japan inventory (ENCS): All components are listed or exempted.

16. OTHER INFORMATION

This material is sold for in vitro use or research purposes only. It is not for any human or animal therapeutic or clinical diagnostic use. This reagent is sold only for research use by personnel familiar with the toxicology of organic chemicals and who are well trained in good laboratory practices. Read instructions for use before using the products. Observe the general safety regulations when handling chemicals. Good laboratory practice is the best preventive measure to avoid hazards. All materials and mixtures may be present unknown hazards and should be used with caution.

Full text of H-Statements referred to under sections 2 and 3.

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H310 Fatal in contact with skin.

H330 Fatal if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It is the users' responsibility to determine the suitability of this information for the adoption of safety precautions as may be necessary. BMA Biomedicals, Division of Chemoforma AG shall not be held liable for any damage resulting from the handling of the above product.