

RESEARCH USE ONLY (RUO)

This material is sold strictly for laboratory and scientific research. It is NOT for human or animal consumption, clinical use, diagnostic use, veterinary use, or any therapeutic application. An SDS does not authorize non-research use.

TB-500

Category: Peptides · Form: lyophilized

CAS: not available / proprietary research compound

Strength / size: As labeled on vial (commonly 5 mg)

1. Identification

Product name: TB-500

Chemical name: TB-500 (Thymosin beta4 fragment / research peptide)

Synonyms: Thymosin beta-4 acetate fragment (research designation)

CAS number: not available / proprietary research compound

Catalog strength / size: As labeled on vial (commonly 5 mg)

Product slug / SKU reference: tb-500 (WooCommerce ID 33)

Recommended use: Laboratory and scientific research only.

Restrictions: RESEARCH USE ONLY. Not for human or animal use, consumption, clinical, diagnostic, or veterinary applications.

Supplier: Chemistry Works LLC

Website: <https://chemistry.works>

Email: help@chemistry.works

Emergency: Contact local poison control / institutional EHS. For product info: help@chemistry.works

2. Hazard identification

Research chemical - hazard classification not fully established for this preparation. Treat as a laboratory substance with unknown complete toxicological profile. Not evaluated for therapeutic use.

GHS classification: No definitive GHS classification assigned by Chemistry Works for this RUO material. Use institutional EHS guidance.

Signal word: Caution (research handling)

Hazard statements: May cause irritation if dust/aerosol contacts eyes, skin, or respiratory tract. Avoid ingestion and unintended exposure. Not for human or animal consumption or clinical use.

Precautionary statements: Obtain special instructions before use. Do not handle until all safety precautions have been read. Wear protective gloves, eye protection, and lab coat. Wash thoroughly after handling. Store locked up / restricted laboratory storage.

Other hazards: Dust from lyophilized powders may be respirable. Solutions may splash. Biological activity in research models does not imply safety for human exposure.

3. Composition / information on ingredients

Primary component: TB-500 (Thymosin beta4 fragment / research peptide)

CAS: not available / proprietary research compound

Concentration: As labeled on vial (commonly 5 mg) (active content as labeled; remaining mass may include residual process-related materials typical of peptide lyophilizates unless otherwise stated).

Other ingredients: Not disclosed in full (may include lyophilization bulking agents or residual salts). Treat as proprietary research formulation where not specified.

Impurities: Analytical certificates (when provided) describe purity for research lots; this SDS does not replace a Certificate of Analysis.

4. First-aid measures

General: Move exposed person to fresh air. Remove contaminated clothing. Seek medical attention if symptoms persist. Show this SDS to medical personnel. Reminder: material is RUO - not a drug.

Inhalation: Move to fresh air. If breathing is difficult, seek medical attention.

Skin contact: Wash with soap and plenty of water. Seek medical advice if irritation develops.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms: Irritation of eyes, skin, or respiratory tract; other effects not fully characterized.

Indication of immediate medical attention: Treat symptomatically. No specific antidote known for this research material.

5. Fire-fighting measures

Suitable extinguishing media: Water spray, alcohol-resistant foam, dry chemical, or CO₂ as appropriate for surrounding fire.

Unsuitable media: None known specific to this product; follow institutional fire procedures.

Specific hazards: Combustion may produce carbon oxides, nitrogen oxides, and other irritating fumes (peptides/organics).

Protective equipment: Firefighters should wear self-contained breathing apparatus and full protective gear.

6. Accidental release measures

Personal precautions: Evacuate unnecessary personnel. Wear gloves, eye protection, and lab coat. Avoid breathing dust or aerosols.

Environmental precautions: Prevent entry into drains, surface water, or soil where prohibited by local regulations.

Methods for containment/cleanup: For powders - gently cover with damp towel or wet wipe to minimize dust; collect into sealed waste container. For liquids - absorb with inert material and place in labeled chemical waste. Clean residue with detergent and water. Dispose per Section 13.

7. Handling and storage

Handling: Handle in a laboratory setting by trained personnel. Avoid generating dust or aerosols. Do not eat, drink, or smoke when using. Wash hands after handling. Do not use for human or animal administration.

Reconstitution: Use appropriate sterile research solvents (e.g. bacteriostatic water) per laboratory protocol. Follow aseptic technique for research vials.

Storage: Store in original sealed container. Protect from light, moisture, and extreme temperatures. Typical research peptide storage: refrigerated (2-8 degC) or frozen as directed by lab protocol / CoA. Keep out of reach of unauthorized persons.

Incompatibilities: Strong oxidizers, strong acids/bases, and conditions that degrade peptides (heat, repeated freeze-thaw when reconstituted).

8. Exposure controls / personal protection

Occupational exposure limits: No specific OELs established by Chemistry Works for this RUO material.

Engineering controls: Use local exhaust ventilation or fume hood when weighing powders or generating aerosols. Eyewash and safety shower nearby.

Eye/face protection: Safety glasses with side shields or chemical goggles.

Skin protection: Chemical-resistant gloves (e.g. nitrile); laboratory coat.

Respiratory protection: If dust/aerosol risk cannot be controlled, use NIOSH-approved respirator per institutional policy.

Hygiene: Wash hands and exposed skin after handling. Do not take material out of the laboratory.

9. Physical and chemical properties

Physical state: Solid (lyophilized powder)

Appearance: White to off-white lyophilized (freeze-dried) powder or cake in sealed sterile vial.

Odor: Odorless.

Solubility: Soluble in bacteriostatic water or other laboratory reconstitution solvents as appropriate for research protocols.

pH, melting/boiling point, flash point, vapor pressure, density: Not determined for this research preparation / not applicable as packaged.

Flammability: Not classified; organic materials may burn if involved in fire.

Other: Strength/size as supplied - As labeled on vial (commonly 5 mg)

10. Stability and reactivity

Reactivity: No dangerous reactions known under normal laboratory handling.

Chemical stability: Stable under recommended storage in sealed container. Lyophilized peptides may degrade with moisture, heat, or improper reconstitution.

Possibility of hazardous reactions: None known under normal conditions.

Conditions to avoid: Excessive heat, moisture, strong light, contamination, incompatible materials.

Incompatible materials: Strong oxidizing agents; extreme pH.

Hazardous decomposition products: Carbon oxides, nitrogen oxides, and other organic decomposition products on combustion.

11. Toxicological information

Acute toxicity: Not fully characterized for this research-grade preparation. Do not assume safety based on related pharmaceutical literature.

Skin corrosion/irritation: May cause irritation.

Serious eye damage/irritation: May cause irritation.

Respiratory or skin sensitization: Data not available; avoid repeated exposure.

Germ cell mutagenicity / carcinogenicity / reproductive toxicity: Data not available for this preparation. Not evaluated by Chemistry Works for these endpoints.

STOT - single or repeated exposure: Data not available.

Aspiration hazard: Not applicable to solid lyophilizate; liquids - avoid aspiration.

Additional information: RESEARCH USE ONLY. Not intended to diagnose, treat, cure, or prevent any disease. Not for human or animal use.

12. Ecological information

Toxicity: Ecological toxicity data not available for this preparation.

Persistence and degradability: Peptides and organics are generally expected to biodegrade; specific data not available.

Bioaccumulative potential: Not determined.

Mobility in soil: Not determined.

Other adverse effects: Avoid release to the environment. Dispose of contents/container in accordance with local regulations.

13. Disposal considerations

Dispose of contents and container in accordance with local, regional, national, and institutional laboratory waste regulations.

Do not dispose down the drain unless permitted by local authority and institutional EHS.

Contaminated packaging: Treat as chemical waste; do not reuse for food or consumer products.

Empty vials may contain residual material - handle as hazardous laboratory waste where required.

14. Transport information

UN number / proper shipping name / transport hazard class / packing group: Not regulated as dangerous goods for transport in typical research-vial quantities when packaged as non-hazardous laboratory samples - verify with carrier if shipping internationally or in bulk.

Environmental hazards: None assigned based on available information.

Special precautions: Protect vials from breakage and temperature extremes during shipping. Ship only for laboratory research purposes in compliance with applicable laws.

Note: Classification may change if reformulated or shipped with other hazardous materials - confirm before consigning.

15. Regulatory information

Safety, health, and environmental regulations: Purchaser is responsible for compliance with all applicable laws regarding possession, research use, and disposal.

This product is sold strictly as a Research Use Only (RUO) laboratory material by Chemistry Works LLC.

Not an FDA-approved drug, dietary supplement, cosmetic, or medical device.

TSCA / REACH / Proposition 65: Status not fully evaluated for every component; laboratory users should assess applicability for their jurisdiction.

Labeling: Product labels and website state research-use restrictions; this SDS supplements but does not replace those notices.

16. Other information

Date of preparation / revision: 2026-07-23

Version: 1.0 (generated RUO template)

Disclaimer: The information in this Safety Data Sheet is believed to be accurate based on generic laboratory handling guidance for research chemicals of this type and product identification data available to Chemistry Works LLC. It is furnished without warranty of any kind, express or implied. The recipient assumes all responsibility for safe use, storage, and disposal in accordance with applicable law and institutional policy.

This document is not a Certificate of Analysis and does not authorize any non-research use.

Contact: help@chemistry.works | <https://chemistry.works>