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Product	TB-500 10mg
Net Peptide Content	12.75 mg
Identity	Thymosin Beta-4

Certificate of Analysis

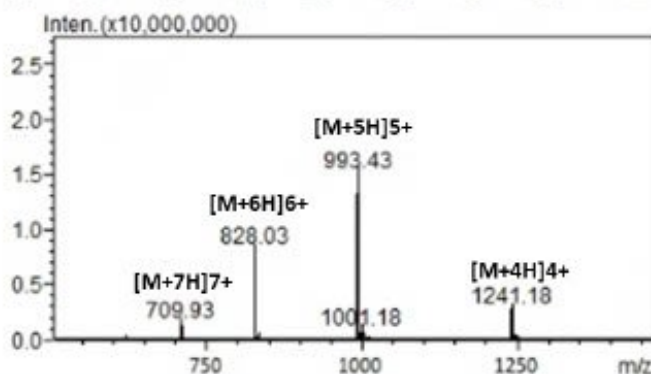
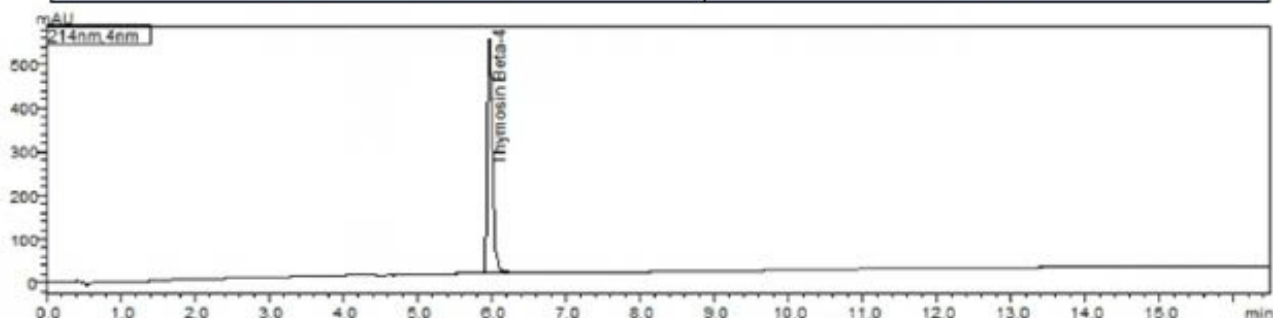
Accession Number	2601290068
Client	Optimal Bio Labs LLC
Search Code	Opti2601290068

Received Date:	01/29/2026
Reported Date:	1/31/2026

Lot	TB10-25265
Purity	99.281%
Appearance	White Lyophilized Powder

All Chemical Analysis was performed by HPLC with UV Detection Coupled with Mass Spectrometry

Mass Identification	Result
Thymosin Beta-4	99.281%



Stephen Schmidt

Stephen Schmidt
Principal Chemist

COA: 2601290068

The peptide purity analysis reported here was conducted using LCMS/MS under standard laboratory conditions. This analysis is intended for informational purposes only and is specific to the sample(s) provided. The peptides tested are intended for research use only and are not approved for human or veterinary use, diagnostic, therapeutic, or clinical applications. Results should be interpreted by qualified professionals within the scope of the intended research. The accuracy and reliability of the test may be influenced by sample integrity, handling, and other experimental variables.

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Contact at: Admin@FreedomDiagnostics.net

TB-500 10mg (TB4 Acetate) Technical Data Sheet

OPTIMAL BIO LABS — TECHNICAL DATA SPECIFICATION SHEET

[✓] ORIGINAL COA / TEST REPORT ATTACHED — PAGE 1

[✓] QUALITY ASSURANCE PROGRAM — PAGE 3

CORE TECHNICAL DATA MATRIX

Product Nomenclature	Thymosin beta-4 (TB-500; TB4 Acetate on product label)
Molecular Classification	43-residue thymosin beta-4 amino acid sequence reference
Molecular Formula	C212H350N56O78S
Molar Mass	4963.4 g/mol

MATERIAL PARAMETERS & SPECIFICATIONS

Form	Lyophilized powder, as listed for this product
Baseline Quality Standard	Verified ≥98.0% via high-performance liquid chromatography (HPLC).
Lot Verification	Sequence matrix matched via analytical mass spectrometry (MS) profile.
Storage Environment	Maintain sealed containment at -20°C, fully insulated from ambient moisture and light. Follow lot-specific instructions when supplied.
Target Application	Intended solely for parallel laboratory research mapping multi-variable hormone axis models.
Analytical Documentation	Results apply only to the sample and lot identified in the attached report.

Target application: For in-vitro laboratory research only. Not for human or veterinary use.

Chemical reference: PubChem compound record. Product specification: Optimal Bio Labs product listing.

Quality Assurance Protocol & Sourcing Transparency

1. Specification Baseline & Quality Threshold

Optimal Bio Labs operates under a standardized Quality Assurance Program. Every synthesized lot is managed against a 99%+ batch target, with a strict baseline purity threshold set at 98.0%. For product variations where a pre-linked independent analysis is unavailable, our internal quality validation framework remains fully active to ensure structural and analytical compliance before inventory release.

2. Sourcing Transparency & Verification Channels

We maintain direct, long-term relationships with a highly selective network of primary synthesis manufacturers. To protect proprietary trade channels and supply logistics, we do not utilize third-party brokers or downstream distributors.

Analytical data and reference documentation are compiled using multi-layered validation sources, which may include direct facility mapping, industry-standard third-party auditing via Fennrick, or independent validation by domestic testing laboratories. Where external reports are generated, they are often routed through the primary source (c/o Optimal Bio Labs) to ensure unaltered documentation for that specific batch variation. Qualifying independent records can be cross-referenced directly through the testing facility's verification systems.

3. Specification Discrepancy & Account Adjustments

We stand behind our strict quality baseline. In the event that a sealed, unopened reference unit from a qualifying lot is submitted to Fennrick for independent verification and returns an objective analytical purity reading below our 98.0% baseline threshold, the following standardized adjustment protocols apply:

- **Material Valuation Credit:** A balance reallocation will be applied to the account covering the baseline cost of the verified lot variation.
- **Logistical Cost Offset:** Account adjustments include credit allocations for standard logistics costs associated with the independent verification process and sample delivery, subject to our published terms and conditions.

Authenticity Through Verifiable Analysis.