OLYMPUS PEPTIDE

TB-500

(Thymosin beta 4)

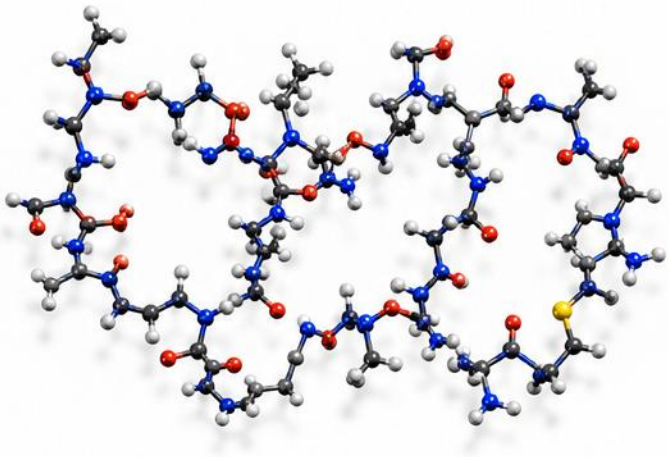
TECHNICAL INFORMATION SHEET

RESEARCH USE ONLY

PRODUCT NAME	TB-500 (Thymosin beta 4)
SYNONYMS	TB-500; Thymosin β4; Tβ4
CAS NUMBER	77591-33-4
PEPTIDE CLASS	Actin-sequestering peptide
PEPTIDE LENGTH	43 amino acids
APPEARANCE	White to off-white lyophilized powder
SOLUBILITY	Soluble in Water for Injection (WFI), bacteriostatic water, or sterile saline
STORAGE (LYOPHILIZED)	2–8°C short-term; –20°C or below for long-term. Protect from light and moisture.
STORAGE (AFTER RECONSTITUTION)	2–8°C. Avoid repeated freeze–thaw cycles.
MOLECULAR WEIGHT	4968.76 g/mol
MOLECULAR FORMULA	$C_{221}H_{350}N_{56}O_{78}S$

ILLUSTRATIVE 3-D MOLECULAR VISUALIZATION

Illustrative 3-D molecular visualization of TB-500 (Thymosin beta 4).



Carbon Hydrogen Nitrogen Oxygen Sulfur

Illustrative 3-D molecular visualization of the TB-500 structure.

The model represents the chemical structure based on the amino acid sequence.

PEPTIDE BACKBONE SEQUENCE (ONE-LETTER CODE)

Sequence (43 amino acids)	M D K P D M A E I E K F D K S K L K K T E T Q E K N P L L P S K E T I E Q E K Q A G E S

Note: This is the peptide backbone sequence (one-letter code).
No post-translational modifications are present in TB-500.

COMPONENT SPECIFICATIONS

PARAMETER	SPECIFICATION
CAS Number	77591-33-4
Amino Acid Sequence (43 amino acids)	MDKPDMAEIEKFDKSKLKKTETQEKNPLPSKETIEQEKQAGES
One-Letter Sequence	MDKPDMAEIEKFDKSKLKKTETQEKNPLPSKETIEQEKQAGES
Molecular Formula	$C_{221}H_{350}N_{56}O_{78}S$
Molecular Weight	4968.76 g/mol

COMBINED MOLECULAR WEIGHT: 4968.76 g/mol.

This value is the sum of the individual peptide molecular weights and is provided for reference only.
The compound is not a single chemical entity.

DESCRIPTION

TB-500 (Thymosin beta 4) is a naturally occurring peptide found in human platelets and many other cells.

It plays a critical role in actin binding, cell migration, angiogenesis, wound healing, and tissue repair.

TB-500 has been investigated for its potential to promote recovery, reduce inflammation, and support regenerative processes.

This peptide is supplied as a lyophilized powder for research use only.

KEY CHARACTERISTICS

- Actin-sequestering peptide
- Naturally occurring in human cells
- Supports cell migration and tissue repair
- Promotes angiogenesis
- Supplied as a sterile lyophilized powder
- Highly water soluble
- Typically analyzed using HPLC and LC-MS
- Stable for long-term frozen storage when lyophilized

SCIENTIFIC NOTE

TB-500 (Thymosin beta 4) is a research peptide and is not approved as a therapeutic drug by the FDA or Health Canada. All use is restricted to laboratory research.

The information provided is for reference purposes only and is not intended for human or veterinary use.