Creative Enzymes®

TB-500 Peptide

Cat. No. TBGZ-001

Lot. No. (See product label)

Introduction

Description	TB-500 Peptide is a synthetic peptide corresponding to an active region of thymosin β4 and is reported to have anti-fibrotic and wound-healing activity associated with inhibition of the Akt signaling pathway and binding to actin.
Synonyms	TB500; TB 500; TB-500

Product Information

Appearance	White to off-white solid
Form	Solid
CAS No.	885340-08-9
Molecular Formula	$C_{38}H_{68}N_{10}O_{14}$
Molecular Weight	889.01
Purity	99.57%
Activity	Anti-fibrotic and wound-healing activity
Pathway	Akt signaling pathway; purinergic P2 receptor signaling
Function	TB-500 is reported to support tissue repair and regeneration. Its active fragment Ac-Tβ4$_{17-23}$ prevents apoptosis, promotes cell survival and angiogenesis, stimulates T-cell proliferation, and shows immunomodulatory activity.
Targets	Actin; purinergic P2 receptors
Solubility	H_2O: ≥ 200 mg/mL (224.97 mM). The saturation concentration was not determined.
Amino Acid Sequence	N-Acetyl-Leu-Lys-Lys-Thr-Glu-Thr-Gln
Quality	Selected batch documentation lists purity 99.98%, assay 99.98%, and ee 99.98%.
Protocol	Stock solution preparation in H_2O (required solvent volume): 1 mM — 1 mg: 1.1248 mL; 5 mg: 5.6242 mL; 10 mg: 11.2485 mL; 25 mg: 28.1212 mL 5 mM — 1 mg: 0.2250 mL; 5 mg: 1.1248 mL; 10 mg: 2.2497 mL; 25 mg: 5.6242 mL 10 mM — 1 mg: 0.1125 mL; 5 mg: 0.5624 mL; 10 mg: 1.1248 mL; 25 mg: 2.8121 mL 15 mM — 1 mg: 0.0750 mL; 5 mg: 0.3749 mL; 10 mg: 0.7499 mL; 25 mg: 1.8747 mL 20 mM — 1 mg: 0.0562 mL; 5 mg: 0.2812 mL; 10 mg: 0.5624 mL; 25 mg: 1.4061 mL 25 mM — 1 mg: 0.0450 mL; 5 mg: 0.2250 mL; 10 mg: 0.4499 mL; 25 mg: 1.1248 mL 30 mM — 1 mg: 0.0375 mL; 5 mg: 0.1875 mL; 10 mg: 0.3749 mL; 25 mg: 0.9374 mL 40 mM — 1 mg: 0.0281 mL; 5 mg: 0.1406 mL; 10 mg: 0.2812 mL; 25 mg: 0.7030 mL 50 mM — 1 mg: 0.0225 mL; 5 mg: 0.1125 mL; 10 mg: 0.2250 mL; 25 mg: 0.5624 mL 60 mM — 1 mg: 0.0187 mL; 5 mg: 0.0937 mL; 10 mg: 0.1875 mL; 25 mg: 0.4687 mL 80 mM — 1 mg: 0.0141 mL; 5 mg: 0.0703 mL; 10 mg: 0.1406 mL; 25 mg: 0.3515 mL 100 mM — 1 mg: 0.0112 mL; 5 mg: 0.0562 mL; 10 mg: 0.1125 mL; 25 mg: 0.2812 mL

Usage and Packaging

Preparation Instructions	Select the solvent according to the solubility information. After preparing a stock

Preparation Instructions	Select the solvent according to the solubility information. After preparing a stock solution, aliquot it to avoid repeated freeze-thaw cycles. If water is used for the stock solution, dilute it to the working concentration and sterilize by filtration through a 0.22 μm filter before use.

Storage and Shipping Information

Storage	Store sealed under nitrogen and protect from moisture and light. Powder: -80°C for 2 years or -20°C for 1 year. In solution: -80°C for 6 months or -20°C for 1 month under the same sealed, moisture- and light-protected conditions.
Shipping Conditions	Room temperature; shipping conditions may vary by destination.