# TB-500

## TISSUE-REPAIR CLAIMS & THYMOSIN-β4 DISTINCTION

Benefits, research claims, evidence boundaries, and safety context—in one page.

IDENTITY MATTERS

PRECLINICAL-HEAVY

### WHAT THE EVIDENCE IS STUDYING

TB-500 is marketed as a synthetic fragment related to thymosin beta-4 (Tβ4), an actin-binding protein involved in cell movement and repair biology. TB-500 and full-length Tβ4 are not interchangeable names.

#### RESEARCH PROFILE

- **Research anchor**
  Thymosin beta-4 biology
- **TB-500 human trials**
  Not established
- **Clinical status**
  Not FDA-approved

### EVIDENCE REALITY CHECK

Published wound and corneal research often evaluates full-length Tβ4, while animal studies explore repair pathways. That evidence cannot be assigned automatically to a marketed TB-500 fragment.

#### BEST WAY TO DESCRIBE IT

A research fragment surrounded by evidence-transfer and identity problems.

**SCAN FOR THE LIVE GUIDE**

Opens the current printable PDF at rippedtidebiolabs.com.

Permanent Education Center resource link.

### 1 CELL MIGRATION

Tβ4 binds actin and has been studied in cell migration, angiogenesis, and tissue-remodeling pathways. These mechanisms are not proof of faster injury recovery in people.

### 2 WOUND RESEARCH

Full-length Tβ4 has been examined in dermal and corneal wound settings, including early human research. This is not equivalent to TB-500 efficacy.

### 3 ANIMAL SIGNALS

Preclinical studies report effects in muscle, tendon, cardiac, and nervous-system injury models. Translation to human dosing and clinical benefit is uncertain.

### 4 CLAIM BOUNDARY

No adequate human evidence establishes TB-500 for tendon, ligament, muscle, or post-surgical healing, pain reduction, or athletic recovery.

### IMPORTANT SAFETY + REGULATORY NOTE

TB-500 is not FDA-approved. Human dosing, pharmacokinetics, long-term safety, cancer-related angiogenesis concerns, interactions, sterility, purity, and correct peptide identity are not established. Athletes should also check current anti-doping rules. Educational only—not medical advice or a recommendation to use.



Sources: Malinda et al., J Invest Dermatol. 1999;113:364-368, PMID 10469335; Goldstein et al., Ann N Y Acad Sci. 2007;1112:219-228; FDA compounding safety-risk resources.