

TB-500

Patient Education Guide — What It Does, Why a Physician Would Prescribe It, and What the Evidence Says

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Important Disclaimer

This information is not medical advice and is provided only to help begin your research. All clinical and dosing decisions must be made with a licensed, experienced physician and a licensed, experienced compounding pharmacist, supported by published clinical studies. This material was compiled using Artificial Intelligence, statements from videos and websites by apparent qualified professionals, and available published research. Anyone starting a medication they have never taken before should take an extremely conservative approach. We are not affiliated with any of the doctors whose videos are referenced below.

TB-500

Investigational

Compounded

Also known as: Fequesetide; the actin-binding fragment (LKKTTETQ) of thymosin beta-4

Category: Tissue Repair & Recovery — Synthetic Peptide Fragment

What it is. TB-500 is a short synthetic peptide corresponding to the active actin-binding region of thymosin beta-4. Where full-length TB4 is 43 amino acids, TB-500 is roughly seven—the key functional piece of a much larger molecule. It is easier and cheaper to synthesize, more stable in solution, and consequently far more common in the peptide market than full-length TB4. Related to TB4, derived from TB4, but a distinct compound; see our [Thymosin Beta-4 page](#) for the parent protein.

How it works, and why physicians pair it with BPC-157. The proposed mechanism follows TB4's: actin regulation driving cell migration, angiogenesis, and tissue remodeling, with anti-inflammatory effects layered on top. Because it distributes systemically through the bloodstream rather than acting only where injected, it is often chosen for patients with multiple injury sites or chronic soft-tissue problems, where injecting each individual site is impractical. That systemic profile is also why it is so commonly stacked with BPC-157—the pairing you see in our recovery blends—with BPC-157 framed as the localized repair signal and TB-500 as the systemic one.

Where the evidence actually is, and the regulatory picture. The systemic regenerative literature for TB-500 is largely rodent and cell-based; high-quality human outcome data does not exist. A 2026 review in *The American Journal of Sports Medicine* concluded that TB-500 shows early preclinical promise but that key questions on dosing, safety, and clinical outcomes remain unanswered. Regulatory status has been in motion: the FDA removed TB-500 from its Section 503A Category 2 list in April 2026, and in July 2026 an FDA advisory committee recommended adding it to the Section 503A Bulks List for wound healing—an advisory vote, not drug approval, with no final agency decision as of this writing. Availability through compounding pharmacies can shift quarter to quarter; your prescriber should verify current status before every prescription. TB-500 is prohibited by WADA at all times. Reported effects are generally mild—injection-site reactions, fatigue, or lightheadedness after a dose.

Published Evidence: Most peer-reviewed TB-500 research to date concerns detection as a doping agent in human and equine sport, plus pharmacokinetic and wound-healing characterization. Rahaman et al. (*J Chromatogr B*, 2024) quantified TB-500 and its metabolites in vitro and in rats and screened wound-healing activity. The broader regenerative rationale is inherited from the thymosin beta-4 literature rather than established independently for the fragment.

Key Study: Rahaman KA, et al. "Simultaneous quantification of TB-500 and its metabolites... and their screening by wound healing activities in-vitro." *J Chromatogr B*. 2024;1235:124033.

Recommended Videos (educational, independent sources)

► **Quinn Stillson, MD** — TB-500 & TB-4: Everything You Need to Know — Benefits, Risks, Dosing & vs BPC-157
<https://www.youtube.com/watch?v=vvBAsQBji0A>

► **Dr. Adam Sewell, MD** — Unlocking TB-500: Dosage, Benefits & Clinical Success for Regenerative Medicine
<https://www.youtube.com/watch?v=OffXGrrzI3A>

► **Thomas DeLauer** — The Best Muscle Building & Fat Loss Peptide | TB-500 (Thymosin Beta 4) Benefits & Risks
<https://www.youtube.com/watch?v=0L-Wx8deXKk>

