

BPC-157/TB-500 Blend — Research Summary

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1. What It Is

The BPC-157/TB-500 Blend is a two-peptide research blend combining **BPC-157** and **TB-500** in a single lyophilized vial, formulated for its combined tissue-repair research focus. As with other blends, exact ratios vary by supplier; confirm the specific split on your product's Certificate of Analysis (COA).

The two components:

Component	Class	Structure
BPC-157	Pentadecapeptide (gastric-derived)	15-amino-acid synthetic fragment (GEPPPGKPADDAGLV) derived from a partial sequence of a human gastric juice protein; MW ~1,419 Da
TB-500	Actin-binding synthetic fragment	Commonly a 17-amino-acid N-terminal-acetylated fragment of thymosin beta-4 (Ac-LKKTETQ-OH), covering the actin-binding domain of the parent 43-amino-acid protein

2. Reported Effects in Research Literature

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No published human data exists for this blend as a combined formulation — the rationale is mechanistic (two complementary tissue-repair pathways), not a tested combined outcome. Component-level evidence:

BPC-157: - Reported gastroprotective and anti-ulcer activity, angiogenesis (VEGFR2 pathway), tendon-ligament and soft-tissue repair, and anti-inflammatory signaling — almost entirely from preclinical/animal research concentrated in a single research group (University of Zagreb, Croatia). - Human data is very limited: an unpublished Phase II ulcerative colitis trial, a discontinued 2015 Phase I safety trial (42 volunteers, results never published), a small 2025 IV pilot safety study (n=2), and one currently ongoing musculoskeletal trial (NCT07437547, acute hamstring strain). No completed, published randomized controlled human efficacy trial exists for BPC-157 as of 2026.

TB-500: - Reported to enhance cellular migration and cytoskeletal remodeling via actin-sequestering activity in preclinical wound-healing models, with reduced myofibroblast formation and organized connective tissue repair. - Important distinction: most human clinical trial data (chronic wound Phase 2 trials, ophthalmic trials) was conducted on the full-length 43-amino-acid Thymosin Beta-4 protein, not the shorter 17-amino-acid TB-500 fragment sold under that name. No completed, published human trials exist specifically for the TB-500 fragment for any indication.

Research limitations to note: - Independent replication outside the originating research groups is limited for both components. - Neither component is FDA-approved for any indication; both have been named in 2026 FDA compounding-list review discussions — check current regulatory status before referencing in customer materials. - **PCAC update (July 23, 2026):** The FDA's Pharmacy Compounding Advisory Committee voted to recommend both BPC-157 and TB-500 for inclusion on the 503A Bulk Drug

Substances List (8–6, one abstention, for each), overriding FDA staff’s own recommendation against inclusion. This is a non-binding advisory recommendation only — it does not add either substance to the list, does not authorize compounding, and does not change RUO sale status for this blend. A formal rulemaking process, expected to take 8–12 months, would be required before any actual change takes effect. - TB-500/thymosin-beta-4-class peptides are on the WADA Prohibited List, relevant for customers in tested athletic contexts.

3. Clinical & Preclinical Study References

BPC-157: - Sikiric P, et al. “Stable gastric pentadecapeptide BPC 157: novel therapy in gastrointestinal tract.” *Curr Pharm Des.* 2011;17(16):1612-32. PMID: [21548867](#) - Ongoing trial: [NCT07437547 — BPC 157 for Acute Hamstring Muscle Strain Repair](#) - Discontinued Phase I: [NCT02637284](#)

TB-500 / Thymosin Beta-4: - Ehrlich HP, Hazard SW 3rd. “Thymosin beta4 enhances repair by organizing connective tissue and preventing the appearance of myofibroblasts.” *Ann N Y Acad Sci.* 2010;1194:118-24. PMID: [20536458](#) - Scoping review: “Thymosin Beta-4 and TB-500 in Tissue Healing, Regeneration, and Musculoskeletal Repair.” [MDPI, 2026](#)

4. Reconstitution Process

For research/laboratory handling purposes only.

Keep out of reach of children. Not for use by pregnant or nursing individuals. For laboratory research use by qualified personnel only.

1. **Materials needed:** lyophilized (freeze-dried) blend powder, bacteriostatic water, alcohol swabs, syringe with needle.
2. **Bring the vial to room temperature** before reconstitution.
3. **Sanitize** the rubber stopper of both vials with an alcohol swab.
4. **Add the water slowly** down the *inside wall* of the vial, to reduce shear/foaming.
5. **Do not shake.** Gently swirl or roll between palms until fully dissolved — thorough mixing matters more for a two-peptide blend than a single-peptide vial, to avoid concentration gradients between draws.
6. **Inspect the solution** — should be clear and free of particulates.
7. **Label the vial** with the blend name, reconstitution date, and concentration.
8. **Storage:** refrigerate (2–8°C); avoid freeze-thaw cycles.

Reference: Bacteriostatic Water Volume by Vial Size

Vial Size (Total Blend)	BAC Water Added	Resulting Total Concentration
5 mg	1 mL	5 mg/mL
5 mg	2 mL	2.5 mg/mL
5 mg	5 mL	1 mg/mL
10 mg	1 mL	10 mg/mL
10 mg	2 mL	5 mg/mL
10 mg	4 mL	2.5 mg/mL
10 mg	5 mL	2 mg/mL
10 mg	10 mL	1 mg/mL

Notes: Higher water volume = more dilute solution; lower volume = more concentrated. Follow supplier COA guidance on the specific BPC-157:TB-500 ratio and fill weight for your lot. Always use bacteriostatic water (0.9% benzyl alcohol) for multi-draw vials; sterile water without preservative should be discarded within 24 hours.

Document created: July 16, 2026. **Revision 1:** July 29, 2026. Regulatory status (FDA compounding lists, WADA lists) is actively shifting; re-verify against current sources before any customer-facing use.

This document is intended for research and internal reference use only. It does not constitute medical advice, dosing guidance, or an endorsement of human use. BPC-157 and TB-500 are not approved by the FDA for the diagnosis, treatment, cure, or prevention of any disease, and the BPC-157/TB-500 Blend as a combined formulation has not been independently studied.