TB-500

Synthetic fragment related to thymosin beta-4

CARD 34

CLASS	CLINICAL CATEGORY	EVIDENCE LEVEL	OVERALL STATUS
Experimental regenerative peptide	Tissue repair	Low / experimental	Not approved — research



KEY APPLICATIONS

- **Wound healing** — Animal models
- **Tendon and muscle** — Preclinical
- **Cardiac repair** — Research
- **Angiogenesis** — Experimental data

Studied for: tissue repair and wound healing. No completed randomized human trials establish efficacy.

HOW IT WORKS IN THE BODY

TB-500 ▸ Actin binding ▸ Cell migration ▸ Tissue repair

- Related to the active domain of **thymosin** beta-4.
- Modulates **actin polymerization and** cell migration.
- Repair data from **animal** models.
- **No clinical** trials support human use.

QUICK PRACTICAL INFO

HALF-LIFE
Not established in humans

ROUTES STUDIED
Subcutaneous / intramuscular (without supporting evidence)

PHARMACOKINETICS
Limited data

STABILITY
Peptide-based; lyophilized

INTERACTIONS
Not determined

MONITORING
Not defined outside research

EVIDENCE & SAFETY

EVIDENCE

LOW
EXPERIMENTAL

- Mostly **preclinical data**.
- Human trials are **scarce**.
- Therapeutic efficacy **not established**.

CLINICAL CAUTION

- Long-term safety **not established**.
- Avoid use **without regulatory backing**.
- **Variable quality** in unregulated products.
- Caution in **pregnancy and lactation**.

REGULATORY STATUS

FDA	EMA	ANVISA	WADA	Research	503A (US)
Not approved as a drug	Status not confirmed	Status not confirmed	Banned for athletes	Yes, limited data	Panel vote Jul 2026; rule pending

CLINICAL READ IN 10 SECONDS

- Sought for **tissue** repair.
- Related to **thymosin** beta-4.
- Preclinical evidence.
- **Banned** in sport.

KEY REFERENCES

PubMed - reviews on thymosin beta-4 and repair

Goldstein et al., 2012 — Expert Opin Biol Ther

WADA — Prohibited List of Substances and Methods

Technical, informational content. It does not replace individualized clinical judgment or constitute a recommendation. No dose, protocol or source is provided.