

# KAIA PEPTIDES — PRODUCT SHEET

## TB-500

*Thymosin Beta-4 Fragment – Systemic Repair, Cellular Migration, Angiogenesis & Recovery Acceleration*

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### What It Is

TB-500 is a synthetic peptide fragment of **Thymosin Beta-4**, a naturally occurring protein found in nearly all human cells. It is widely researched for:

- Accelerated tissue repair
- Enhanced cellular migration
- Improved blood flow and angiogenesis
- Reduced inflammation
- Muscle, tendon, ligament, and skin recovery
- Systemic regeneration across multiple tissues

TB-500 is known for working **throughout the entire body**, not just at a single injury site.

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### Understanding TB-500 — A Metaphorical Story

Imagine your body as a huge country filled with roads, highways, bridges, and repair stations.

Every day:

- Roads crack (muscle microtears)
- Bridges weaken (tendon & ligament strain)
- Traffic slows (inflammation)
- Delivery routes get blocked (poor blood flow)

Most repair crews stick to one small area...  
but TB-500 is different.

**TB-500 is the nation's high-speed repair commander — mobile, fast, and everywhere at once.**

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- **TB-500 Builds New Highways (angiogenesis)**

It constructs **new roads and microvessel pathways** so nutrients, oxygen, and cells can reach damaged areas faster.

This improves the entire transportation system.

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- **It Deploys Repair Crews Across the Map (cellular migration)**

Instead of waiting for healing cells to slowly wander toward an injury:

TB-500 sends them directly to the site.

Fast.

Efficient.

Coordinated.

This is why recovery appears accelerated in research models.

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- **It Clears Traffic Jams (reduces inflammation)**

TB-500 helps calm congestion caused by swelling and irritation.

Less traffic = faster repairs.

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- **It Supports Large-Scale Restoration (systemic action)**

Unlike localized peptides that stay near where they're administered:

**TB-500 moves freely throughout the entire body**, working on multiple tissues at once.

Muscles

Tendons

Ligaments

Skin

Organs  
Nerves

Every region benefits from improved flow, repair, and cell movement.

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## **The Result: A Countrywide Repair System That Moves Faster & Heals Smarter**

With TB-500 directing traffic:

- New blood vessels form
- Repair cells reach the target sooner
- Inflammation drops
- Tissues rebuild more effectively
- The entire system becomes more efficient

This metaphor illustrates TB-500's broad, systemic regenerative profile.

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## **Primary Research Benefits**

*(Summarized from published scientific literature)*

### **• Enhanced Tissue Repair**

- Helps repair muscles, tendons, ligaments, skin
- Supports wound-healing pathways

### **• Angiogenesis (New Blood Vessel Formation)**

- Improves circulation to damaged areas
- Enhances oxygen + nutrient delivery

### **• Accelerated Cellular Migration**

- Mobilizes healing cells toward injury sites
- Speeds early-stage repair mechanisms

### **• Anti-Inflammatory Support**

- Helps reduce swelling and irritation
- Creates a cleaner healing environment

- **Systemic Regeneration**

- Moves freely throughout the body
  - Can support multiple tissues at the same time
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## Common Research Use Cases

- Muscle tears or strain models
  - Tendon and ligament recovery
  - Wound-healing studies
  - Post-exercise performance recovery
  - Inflammation modulation
  - Systemic regeneration experiments
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## Typical Research Protocols (Literature-Based)

*(For educational/reference purposes; not medical advice)*

- **Duration:** 4–8 weeks
  - **Frequency:** 2–3× weekly or daily
  - **Vial:** TB-500
  - **Reconstitution:** With bacteriostatic water
  - **Route:** Subcutaneous in research settings
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## Storage & Stability

- Store lyophilized at **2–8°C**
  - Use within **30 days** after reconstitution
  - Keep away from heat, moisture, and light
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## Safety Profile (Research-Based Notes)

- Non-hormonal
  - Generally well tolerated
  - Widely studied in regenerative biology
  - Low toxicity based on available data
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## Format

- **TB-500 lyophilized powder**
  - Research Use Only
  - Purity: **≥99%** (third-party verified)
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## Legal & Compliance

**For Research Use Only. Not for human consumption.**

**Not approved by the FDA to diagnose, treat, cure, or prevent any disease.**

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## Brand Finishing (Kaia Style)

**Improve the flow. Mobilize the repair.**

**A systemic regeneration peptide for advanced recovery research.**