

# KAIA PEPTIDES — PRODUCT SHEET

## MOTS-C (10mg)

*Mitochondrial-Derived Peptide – Energy, Metabolism & Cellular Performance*

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### What It Is

MOTS-C is a naturally occurring peptide encoded within mitochondrial DNA. It helps regulate metabolic balance, cellular energy production, and stress adaptation. Research shows MOTS-C enhances the body's ability to convert fuel into usable energy by activating AMPK — the master switch for cellular metabolism.

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### Understanding MOTS-C — A Metaphorical Story

**Imagine your body as a giant city.**

Every cell is a house. Every house has a power plant in the basement — the mitochondria. That's where the lights stay on, the heat works, and everything in the house runs smoothly.

But sometimes the city hits problems:

- The lights flicker during stress
- The power plants run low on fuel
- The workers get tired
- The streets get blocked with “metabolic traffic”
- Some houses can't keep up

Now imagine a **special emergency worker** that lives *inside* the power plants — a tiny firefighter-engineer hybrid who only comes out when the city is struggling.

**That worker is MOTS-C.**

When things slow down, MOTS-C rushes out into the city and starts:

- **Turning on backup generators (AMPK activation)**

It flips the main switch that says:

**“We’re low on energy — let’s start burning fuel efficiently and cleanly.”**

- **Clearing the streets (improving glucose use)**

Traffic jams (inefficient fuel usage) disappear.

- **Delivering fresh supplies (supporting metabolic flexibility)**

Houses get the exact fuel they need so the lights stay bright.

- **Motivating the workers (reducing fatigue & improving stress resilience)**

The entire city feels more energized and coordinated.

- **Strengthening the power plants (supporting mitochondrial function)**

Repairs are made from the inside out — not just patchwork, but real upgrades.

**The result:**

The whole city runs smoother, cleaner, and with more energy — no matter the stress, weather, or demands placed on it.

This is the simplest way to imagine how MOTS-C helps the body adapt, energize, and recover.

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## **Primary Research Benefits**

*(Summarized from published scientific literature)*

- **Metabolic Health & Blood Sugar Support**

- Helps regulate glucose utilization
- Shown to improve insulin sensitivity in research models
- Supports metabolic flexibility
- May aid healthy body composition in stress conditions

- **Enhanced Cellular Energy**

- Improves mitochondrial efficiency
- Supports ATP production
- May increase endurance, stamina, and exercise output

- **Stress & Fatigue Resistance**

- Boosts cellular resilience during metabolic stress
- Supports post-exercise recovery
- May reduce fatigue in oxidative stress models

- **Longevity Pathway Activation**

- Activates AMPK, a key longevity and metabolic enzyme
  - Supports healthy aging processes
  - Helps maintain cellular balance and homeostasis
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## Common Research Use Cases

- Mitochondrial function & energy regulation models
  - Metabolic health & glucose utilization studies
  - Endurance, stamina, and exercise performance research
  - Weight management & body composition studies
  - Longevity and stress-adaptation 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 in most study models
  - **Common Dilution:** 10mg vial reconstituted with bacteriostatic water
  - **Common Administration Routes in Studies:** Subcutaneous or intramuscular research models
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## Storage & Stability

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

- Strong safety profile in available mitochondrial peptide literature
  - Non-stimulatory and non-hormonal
  - No significant toxicity reported in published studies
  - High tolerance observed in metabolic and exercise research models
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## Format

- **10mg lyophilized powder**
  - Research Use Only
  - Purity: **≥99%** (verified by third-party analysis)
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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)

**Where wellness meets mitochondrial power.**

**Built for researchers who study performance at the cellular level.**