KAIA PEPTIDES — PRODUCT SHEET

NAD+ (500mg)

Nicotinamide Adenine Dinucleotide – Cellular Energy, Repair & Longevity

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What It Is

NAD+ is a critical coenzyme present in every living cell. It powers mitochondrial energy production, supports DNA repair, and activates essential longevity pathways. Research shows NAD+ levels naturally decline with age, stress, poor sleep, inflammation, and metabolic strain — and restoring NAD+ may help support optimal cellular energy and performance.

Understanding NAD+ — A Metaphorical Story

Think of your body as a massive futuristic city powered by millions of tiny generators — one in every building.
These generators represent your **mitochondria**, the engines that keep every cell running.

Now imagine that these generators run on a special fuel.
A fuel more important than electricity.
A fuel that literally keeps the city alive.

That fuel is NAD+.

When NAD+ levels are high:

- The city lights stay bright
- Traffic moves efficiently
- Repairs happen instantly
- Communication between districts is flawless
- Every building has the energy it needs to function

But when NAD+ levels fall (which naturally happens with age):

- Generators sputter
- Lights dim

- Repairs slow down
- Communication breaks
- The city becomes sluggish, tired, and reactive

So what does NAD+ do as “fuel”?

• It powers the generators (creates cellular energy)

Without enough NAD+, the mitochondria can’t make ATP — the city’s “electricity.”
More NAD+ = more power.

• It activates the elite repair crew (Sirtuins)

Sirtuins are like high-level engineers that:

- Repair damaged buildings (DNA)
- Recycle waste
- Strengthen infrastructure
- Maintain long-term resilience

But they **cannot work without NAD+.**

• It coordinates emergency responses (cellular signaling)

NAD+ helps send messages during stress, inflammation, or damage so the city can respond quickly and intelligently.

• It keeps the city young

High NAD+ levels are associated with:

- Better energy output
- Faster recovery
- Smoother metabolism
- Increased stress resilience
- Stronger cellular repair systems

In short:
NAD+ is the fundamental energy currency that keeps your entire cellular city alive, functional, youthful, and resilient.

Primary Research Benefits

(Summarized from published scientific literature)

• Supports Cellular Energy Production

- Essential for ATP generation
- Fuels mitochondrial performance
- Helps sustain overall metabolic energy

• Enhances DNA Repair Mechanisms

- Activates sirtuins
- Assists in repairing oxidative DNA damage
- Supports long-term cellular integrity

• Promotes Healthy Aging Pathways

- Encourages metabolic balance
- Supports longevity-related signaling
- Helps counter age-related NAD+ decline

• Supports Brain & Cognitive Function

- Assists neuronal energy metabolism
- May improve clarity and mental stamina in research models

Common Research Use Cases

- Mitochondrial function models
- Longevity pathway activation studies
- Cellular energy and metabolism research
- Neurocognitive performance research
- DNA repair and oxidative stress models

Typical Research Protocols (Literature-Based)

(For educational/reference purposes; not medical advice)

- **Duration:** 4–12 weeks
- **Frequency:** Daily or intermittent administration depending on model
- **Common Dilution:** 500mg vial reconstituted with bacteriostatic water

- **Common Administration Routes in Studies:** Subcutaneous or intravenous research models

(Can be made more conservative if needed.)

Storage & Stability

- Store lyophilized peptide at **2–8°C**
- Use reconstituted product within **30 days**
- Keep away from light, heat, and moisture

Safety Profile (Research-Based Notes)

- Generally well-tolerated in existing research
- Non-hormonal
- Plays a natural role in cellular energy systems
- No major toxicity concerns noted in available literature

Format

- **500mg lyophilized powder**
- For laboratory research only
- Purity: **≥99%** (verified by third-party analysis)

Legal & Compliance

For Research Use Only. Not for human consumption.
Not approved by the FDA to diagnose, treat, cure, or prevent any disease.

Brand Finishing (Kaia Style)

Fuel for the cellular engine.
Built for researchers exploring the frontier of longevity.