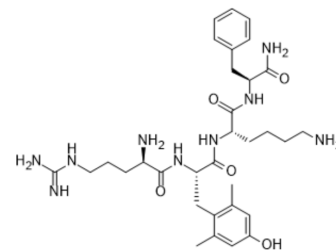


Elamipretide

Cat. No.:	HY-P0125
CAS No.:	736992-21-5
Molecular Formula:	C ₃₂ H ₄₉ N ₉ O ₅
Molecular Weight:	639.79
Sequence:	{d-Arg}-{Dmt}-Lys-Phe-NH ₂
Sequence Shortening:	{d-Arg}-{Dmt}-KF-NH ₂
Target:	Mitochondrial Metabolism
Pathway:	Metabolic Enzyme/Protease
Storage:	Sealed storage, away from moisture
	Powder -80°C 2 years
	-20°C 1 year



* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 29 mg/mL (45.33 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		1.5630 mL	7.8151 mL	15.6301 mL
	5 mM		0.3126 mL	1.5630 mL	3.1260 mL
	10 mM		0.1563 mL	0.7815 mL	1.5630 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Elamipretide (MTP-131) is a mitochondria-targeting peptide, which ameliorates myocardial infarction, improves the renal function and protects neurons from inflammatory and oxidative stress injury^{[1][2]}.

IC₅₀ & Target

Cardiolipin peroxidase^[1]

In Vivo

Elamipretide (5 mg/kg, i.p., once daily for 3 days) exhibits neuroprotective effects, protects the hippocampus from mitochondrial dysfunction, and attenuates the oxidative stress and inflammatory response in Lipopolysaccharide (HY-D1056)-induced cognitive impairment in C57BL/6 mice model^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	LPS-induced cognitive impairment in C57BL/6 mice model ^[1]
Dosage:	5 mg/kg
Administration:	i.p., once daily for 3 days
Result:	Maintained the mitochondrial function, ROS and MDA levels, and SOD activity. Inhibited neural cell apoptosis in hippocampus, enhanced the hippocampal BDNF pathway and synaptic structural complexity.

CUSTOMER VALIDATION

- Sci Adv. 2022 Apr 8;8(14):eabl4370.
- Cell Commun Signal. 2024 Jan 10;22(1):26.
- JCI Insight. 2021 Dec 7;e152102.
- Biomed Pharmacother. 2024 Jan 9;171:116110.
- Hum Mol Genet. 2019 Apr 1;28(7):1100-1116.

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REFERENCES

[1]. Zhao W, et al., Elamipretide (SS-31) improves mitochondrial dysfunction, synaptic and memory impairment induced by lipopolysaccharide in mice. J Neuroinflammation. 2019 Nov 20;16(1):230.

[2]. Sabbah HN, et al., Chronic Therapy With Elamipretide (MTP-131), a Novel Mitochondria-Targeting Peptide, Improves Left Ventricular and Mitochondrial Function in Dogs With Advanced Heart Failure. Circ Heart Fail. 2016 Feb;9(2):e002206.

Caution: Product has not been fully validated for medical applications. For research use only.

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