

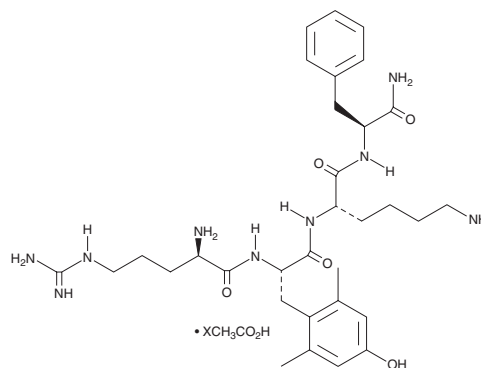
# PRODUCT INFORMATION



## MTP 131 (acetate)

Item No. 33302

**CAS Registry No.:** 1334953-95-5  
**Formal Name:** D-arginyl-2,6-dimethyl-L-tyrosyl-L-lysyl-L-phenylalaninamide, acetate  
**Synonyms:** Elamipretide, SS-31  
**MF:** C<sub>32</sub>H<sub>49</sub>N<sub>9</sub>O<sub>5</sub> • XC<sub>2</sub>H<sub>4</sub>O<sub>2</sub>  
**FW:** 639.8  
**Purity:** ≥95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

MTP 131 (acetate) is supplied as a crystalline solid. Aqueous solutions of MTP 131 (acetate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of MTP 131 (acetate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

MTP 131 is a mitochondria-targeted peptide antioxidant.<sup>1,2</sup> It localizes to the mitochondria and reduces *tert*-butyl hydroperoxide-induced lipid peroxidation and apoptosis in SH-SY5Y cells when used at concentrations ranging from 0.001 to 1 nM.<sup>1</sup> MTP 131 (2 mg/kg) reduces infarct volume, hemispheric swelling, and glutathione (GSH) depletion in a mouse model of acute cerebral ischemia induced by middle cerebral artery occlusion (MCAO).<sup>2</sup> It increases survival, improves motor function, and decreases degeneration of the lumbar spinal cord in a superoxide dismutase 1 mutant (SOD1<sup>G93A</sup>) transgenic mouse model of amyotrophic lateral sclerosis (ALS) when administered at a dose of 5 mg/kg. MTP 131 reduces albuminuria, urinary hydrogen peroxide levels, and mesangial matrix accumulation, as well as preserves superoxide production, in a *db/db* mouse model of diabetic nephropathy.<sup>3</sup>

### References

1. Zhao, K., Luo, G., Giannelli, S., *et al.* Mitochondria-targeted peptide prevents mitochondrial depolarization and apoptosis induced by *tert*-butyl hydroperoxide in neuronal cell lines. *Biochem. Pharmacol.* **70**(12), 1796-1806 (2005).
2. Szeto, H.H. Mitochondria-targeted peptide antioxidants: Novel neuroprotective agents. *AAPS J.* **8**(3), E521-E531 (2006).
3. Miyamoto, S., Zhang, G., Hall, D., *et al.* Restoring mitochondrial superoxide levels with elamipretide (MTP-131) protects *db/db* mice against progression of diabetic kidney disease. *J. Biol. Chem.* **295**(21), 7249-7260 (2020).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/26/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM