

Product Name: P110

Catalog No.: 6897

Batch No.: 4

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₀₀H₁₇₉N₄₅O₂₅
Batch Molecular Weight: 2411.8
Physical Appearance: White lyophilised solid
Net Peptide Content: 67%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Gly-Gly-Asp-Leu-Leu-Pro-Arg-Gly-Ser-NH₂

2. ANALYTICAL DATA

HPLC: Shows 97% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala				Lys	2.00	1.85	
Arg	7.00	6.84	Met				
Asx	1.00	1.00	Phe				
Cys			Pro	1.00	1.04		
Glx	1.00	0.98	Ser	1.00	1.03		
Gly	4.00	4.00	Thr				
His			Trp				
Ile			Tyr	1.00	0.88		
Leu	2.00	1.94	Val				

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Dynamin-related protein 1 (Drp1) inhibitor, inhibits Drp1 GTPase activity. Displays no effect on dynamin 1 or other mitochondrial dynamics-related proteins. Inhibits mitochondrial fission, dysfunction and reactive oxygen species (ROS) production in vitro. Reduces programmed cell death and improves cell viability by protecting mitochondrial integrity. Reduces mitochondrial fragmentation and mitochondrial ROS production in mouse model of Parkinson's disease. Cell permeable.

Physical and Chemical Properties:

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Physical Appearance: White lyophilised solid

Peptide Sequence:

Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Gly-Gly-Asp-Leu-Leu-Pro-Arg-Gly-Ser-NH₂

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in water

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Net Peptide Content: 67% (Remaining weight made up of counterions and residual water).

Counter Ion: TFA

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

References:

Filichia et al (2016) Inhibition of Drp1 mitochondrial translocation provides neural protection in dopaminergic system in a Parkinson's disease model induced by MPTP. *Sci.Rep.* **13** 32656. PMID: 27619562.

Qi et al (2013) A novel Drp1 inhibitor diminishes aberrant mitochondrial fission and neurotoxicity. *J.Cell Sci.* **126** 789. PMID: 23239023.

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