

Product Name: Davunetide

Catalog No.: 6779

Batch No.: 3

CAS Number: 211439-12-2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₆H₆₀N₁₀O₁₂
Batch Molecular Weight: 824.93
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln

2. ANALYTICAL DATA

HPLC: Shows 98.4% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	Amino Acid Theoretical Actual		
Ala	1.00	0.96	Lys		
Arg			Met		
Asx	1.00	1.00	Phe		
Cys			Pro	2.00	2.01
Glx	1.00	1.02	Ser	1.00	0.98
Gly			Thr		
His			Trp		
Ile	1.00	1.02	Tyr		
Leu			Val	1.00	1.01

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

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Description:

Davunetide is a highly potent active component of activity-dependent neuroprotective protein (ADNP). Prevents β -amyloid aggregation. Reduces hyperphosphorylated tau levels and increases tau-microtubule interactions; neuroprotective at femtomolar concentrations in vitro. Exerts neuroprotective effects in schizophrenia models associated with microtubule-autophagy insufficiency in MAP6-deficient mice. Modulates HIFs and VEGF expression and suppresses retinal cell apoptosis in an in vivo diabetic retinopathy model.

Physical and Chemical Properties:

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Batch Molecular Weight: 824.93

Physical Appearance: White lyophilised solid

Peptide Sequence:

Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln

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.

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 μ m filter to remove potential bacterial contamination whenever possible.

References:

D'Amico et al (2018) NAP counteracts hyperglycemia/hypoxia induced retinal pigment epithelial barrier breakdown through modulation of HIFs and VEGF expression. *J.Cell Physiol.* **233** 1120. PMID: 28436035.

Ivashko-Pachima et al (2017) ADNP/NAP dramatically increase microtubule end-binding protein-Tau interaction: a novel avenue for protection against tauopathy. *Mol Psychiatry* **22** 1335. PMID: 28115743.

Melo et al (2017) Impairment of mitochondria dynamics by human A53T α -synuclein and rescue by NAP (davunetide) in a cell model for Parkinson's disease. *Exp.Brain Res.* **235** 731. PMID: 27866262.

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