

Certificate of Analysis

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Product Name: PE 22-28

Catalog No.: 7868

Batch No.: 2

CAS Number: 1801959-12-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₅H₅₅N₁₁O₉
Batch Molecular Weight: 773.89
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Gly-Val-Ser-Trp-Gly-Leu-Arg

2. ANALYTICAL DATA

HPLC: Shows 98.6% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys		
Arg	1.00	1.02	Met		
Asx			Phe		
Cys			Pro		
Glx			Ser	1.00	0.99
Gly	2.00	2.01	Thr		
His			Trp	1.00	Not Detected
Ile			Tyr		
Leu	1.00	1.02	Val	1.00	0.97

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

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Batch No.: 2

CAS Number: 1801959-12-5

Description:

PE 22-28 is a potent inhibitor of potassium channel subfamily K member 2/TREK-1 (IC_{50} = 0.12 nM). In rodent models of ischemia PE 22-28 reduces apoptotic death of β cells, increases hippocampal neurogenesis, and reduces stroke-induced motor and cognitive defects.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{35}H_{55}N_{11}O_9$

Batch Molecular Weight: 773.89

Physical Appearance: White lyophilised solid

Peptide Sequence:

Gly-Val-Ser-Trp-Gly-Leu-Arg

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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:

Daziano *et al* (2021) Sortilin-derived peptides promote pancreatic beta-cell survival through CREB signaling pathway. *Pharmacol. Res.* **167** 105539. PMID: 33737242.

Pietri *et al* (2019) First evidence of protective effects on stroke recovery and post-stroke depression induced by sortilin-derived peptides. *Neuropharmacology* **158** 107715. PMID: 31325429.

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