

Certificate of Analysis

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Product Name: Prosaptide TX14(A)

Catalog No.: 5151

Batch No.: 5

CAS Number: 196391-82-9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆₉H₁₁₀N₁₆O₂₆
Batch Molecular Weight: 1579.72
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Thr-D-Ala-Leu-Ile-Asp-Asn-Asn-Ala-Thr-Glu-Glu-Ile-Leu-Tyr

2. ANALYTICAL DATA

HPLC: Shows 97.6% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	2.00	2.00	Lys		
Arg			Met		
Asx	3.00	3.04	Phe		
Cys			Pro		
Glx	2.00	2.04	Ser		
Gly			Thr	2.00	1.98
His			Trp		
Ile	2.00	1.98	Tyr	1.00	1.00
Leu	2.00	1.96	Val		

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

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Description:

Prosaptide TX14(A) is a potent GPR37L1 and GPR37 agonist (EC₅₀ values are 5 and 7 nM, respectively). Stimulates signaling through pertussis toxin-sensitive G proteins. Stimulates ERK phosphorylation. Protects against cellular stress. Promotes myelin lipid synthesis and prolongs cell survival in both Schwann cells and oligodendrocytes; neuroprotective and glioprotective.

Physical and Chemical Properties:

Batch Molecular Formula: C₆₉H₁₁₀N₁₆O₂₆

Batch Molecular Weight: 1579.72

Physical Appearance: White lyophilised solid

Peptide Sequence:

Thr-D-Ala-Leu-Ile-Asp-Asn-Asn-Ala-Thr-Glu-
Glu-Ile-Leu-Tyr

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 µm filter to remove potential bacterial contamination whenever possible.

References:

Meyer *et al* (2013) GPR37 and GPR37L1 are receptors for the neuroprotective and glioprotective factors prosaptide and prosaposin. *Proc.Natl.Acad.Sci.USA*. **110** 9529. PMID: 23690594.

Hiraiwa *et al* (1997) Cell death prevention, mitogen-activated protein kinase stimulation, and increased sulfatide concentrations in Schwann cells and oligodendrocytes by prosaposin and prosaptides. *Proc.Natl.Acad.Sci.USA*. **94** 4778. PMID: 9114068.

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