

Certificate of Analysis

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Product Name: ¹⁰Panx
CAS Number: 955091-53-9

Catalog No.: 3348 **Batch No.:** 11

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₅₈H₇₉N₁₅O₁₆
Batch Molecular Weight: 1242.37
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Trp-Arg-Gln-Ala-Ala-Phe-Val-Asp-Ser-Tyr

2. ANALYTICAL DATA

HPLC: Shows 96.4% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala	2.00	1.85	Lys				
Arg	1.00	1.00	Met				
Asx	1.00	0.99	Phe	1.00	0.99		
Cys			Pro				
Glx	1.00	0.99	Ser	1.00	1.00		
Gly			Thr				
His			Trp	1.00	Not Detected		
Ile			Tyr	1.00	1.05		
Leu			Val	1.00	0.99		

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

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CAS Number: 955091-53-9

Description:

¹⁰Panx is a panx-1 mimetic inhibitory peptide that blocks pannexin-1 gap junctions. Inhibits P2X₇-mediated dye uptake, ATP-mediated IL-1 β release and caspase-1 activation without altering membrane current in macrophages in vitro. Also blocks activation of NMDA receptor secondary currents (I_{2nd}) by > 70%.

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Peptide Sequence:

Trp-Arg-Gln-Ala-Ala-Phe-Val-Asp-Ser-Tyr

Storage: Store at -20°C**Solubility & Usage Info:**

Soluble to 1 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:

Thompson *et al* (2008) Activation of pannexin-1 hemichannels augments aberrant bursting in the hippocampus. *Science* **322** 1555. PMID: 19056988.

Wang *et al* (2007) Modulation of membrane channel currents by gap junction protein mimetic peptides: size matters. *Am.J.Physiol.Cell Physiol.* **293** C1112. PMID: 17652431.

Pelegriin and Surprenant (2006) Pannexin-1 mediates large pore formation and interleukin-1 β release by the ATP-gated P2X₇ receptor. *EMBO J.* **25** 5071. PMID: 17036048.

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