

Certificate of Analysis

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Product Name: G-Protein antagonist peptide

Catalog No.: 1931

Batch No.: 9

CAS Number: 143675-79-0

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₅₇H₆₄N₁₂O₉S
Batch Molecular Weight: 1093.27
Physical Appearance: White lyophilised solid
Net Peptide Content: 100%
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in DMSO
Storage: Desiccate at -20°C
Peptide Sequence: Glp-Gln-D-Trp-Phe-D-Trp-D-Trp-Met-NH₂

2. ANALYTICAL DATA

HPLC: Shows 100% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala				Lys			
Arg				Met			
Asx				Phe	1.00		0.90
Cys				Pro			
Glx	2.00		2.10	Ser			
Gly				Thr			
His				Trp			
Ile				Tyr			
Leu				Val			

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

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Product Name: G-Protein antagonist peptide

Catalog No.: 1931

Batch No.: 9

CAS Number: 143675-79-0

Description:

Substance P-related peptide that inhibits binding of G proteins to their receptors. Competitively and reversibly inhibits M₂ muscarinic receptor activation of G_i or G_o and inhibits G_s activation by β-adrenoceptors.

Physical and Chemical Properties:

Batch Molecular Formula: C₅₇H₆₄N₁₂O₉S

Batch Molecular Weight: 1093.27

Physical Appearance: White lyophilised solid

Peptide Sequence:

Glp-Gln-D-Trp-Phe-D-Trp-D-Trp-Met-NH₂

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in DMSO

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: 100% (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:

Mukai *et al* (1992) G protein antagonists. A novel hydrophobic peptide competes with receptor for G protein binding. *J.Biol.Chem.* **267** 16237. PMID: 1379592.

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