

Certificate of Analysis

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Product Name: HNGF6A

Catalog No.: 5154

Batch No.: 1

CAS Number: 1093111-54-6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁₂H₁₉₈N₃₄O₃₁S₂
Batch Molecular Weight: 2581.13
Physical Appearance: White lyophilised solid
Net Peptide Content: 77%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Met-Ala-Pro-Arg-Gly-Ala-Ser-Cys-Leu-Leu-Leu-Leu-Thr-Gly-Glu-Ile-Asp-Leu-Pro-Val-Lys-Arg-Arg-Ala

2. ANALYTICAL DATA

HPLC: Shows 95% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	3.00	2.75	Lys	1.00	1.00
Arg	3.00	2.99	Met	1.00	1.11
Asx	1.00	0.99	Phe		
Cys			Pro	2.00	1.94
Glx	1.00	0.99	Ser		
Gly	2.00	1.94	Thr	1.00	1.00
His			Trp		
Ile	1.00	0.79	Tyr		
Leu	5.00	4.48	Val	1.00	1.01

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

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Product Information

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Product Name: HNGF6A

Catalog No.: 5154

Batch No.: 1

CAS Number: 1093111-54-6

Description:

Humanin analog; increases glucose stimulated insulin secretion and glucose metabolism in vivo and in vitro. Also enhances glucose sensing in β TC3 cells and lowers blood glucose in Zucker diabetic fatty rats. Prevents endothelial dysfunction and delays progression of atherosclerosis in vivo. Protects neurons from NMDA-induced toxicity.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{112}H_{198}N_{34}O_{31}S_2$

Batch Molecular Weight: 2581.13

Physical Appearance: White lyophilised solid

Peptide Sequence:

Met-Ala-Pro-Arg-Gly-Ala-Ser-Cys-Leu-Leu-
Leu-Leu-Thr-Gly-Glu-Ile-Asp-Leu-Pro-Val-
Lys-Arg-Arg-Ala

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in water

This product is supplied as a lyophilised solid and may be very hard to visualise. 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: 77% (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 μ m filter to remove potential bacterial contamination whenever possible.

References:

Alam et al (2018) A small molecule mimetic of the humanin peptide as a candidate for modulating NMDA-induced neurotoxicity. *ACS Chem. Neurosci.* **9** 462. PMID: 29161500.

Kuliawat et al (2013) Potent humanin analog increases glucose-stimulated insulin secretion through enhanced metabolism in the β cell. *FASEB J.* **27** 4890. PMID: 23995290.

Oh et al (2011) Humanin preserves endothelial function and prevents atherosclerotic plaque progression in hypercholesterolemic ApoE deficient mice. *Atherosclerosis.* **219** 65. PMID: 21763658.

Muzumdar et al (2009) Humanin: a novel central regulator of peripheral insulin action. *PLoS One.* **4** e6334. PMID: 19623253.

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