

Product Name: ELA-21 (human)

Catalog No.: 6697

Batch No.: 1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁₂H₁₈₄N₄₀O₂₅S₃
Batch Molecular Weight: 2587.12
Physical Appearance: White lyophilised solid
Net Peptide Content: 70%
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Leu-Arg-Lys-His-Asn-Cys-Leu-Gln-Arg-Arg-
 Cys-Met-Pro-Leu-His-Ser-Arg-Val-Pro-Phe-Pro

2. ANALYTICAL DATA

HPLC: Shows 98.5% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys	1.00	1.02
Arg	4.00	3.96	Met	1.00	0.99
Asx	1.00	1.01	Phe	1.00	1.05
Cys	2.00	Detected	Pro	3.00	2.94
Glx	1.00	1.01	Ser	1.00	0.92
Gly			Thr		
His	2.00	2.04	Trp		
Ile			Tyr		
Leu	3.00	3.02	Val	1.00	1.08

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

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Description:

High affinity apelin receptor agonist. Binds apelin receptors in left ventricle from normal and pulmonary arterial hypertensive (PAH) hearts (pK_i values are 9.31 and 9.46, respectively). Bioactive fragment of ELA-32 (Cat. No. 6291). Inhibits forskolin-induced cAMP production and stimulates β-arrestin recruitment in vitro.

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Cys-Met-Pro-Leu-His-Ser-Arg-Val-Pro-Phe-Pro

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in water

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: 70% (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:

Yang et al (2017) Elabela/Toddler is an endogenous agonist of the apelin APJ receptor in the adult cardiovascular system, and exogenous administration of the peptide compensates for the downregulation of its expression in pulmonary arterial hypertension. *Circulation* **135** 1160. PMID: 28137936.

Deng et al (2015) Apela regulates fluid homeostasis by binding to the APJ receptor to activate G_i signaling. *J.Biol.Chem.* **290** 18261. PMID: 25995451.

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