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Print Date: Jan 11th 2021

Certificate of Analysis

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Product Name: **[Pyr^1]-Apelin-13** **Catalog No.: 2420** **Batch No.: 7**

CAS Number: 217082-60-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	$C_{69}H_{108}N_{22}O_{16}S$
Batch Molecular Weight:	1533.81
Physical Appearance:	White lyophilised solid
Net Peptide Content:	73.2%
Counter Ion:	TFA
Solubility:	Soluble to 1 mg/ml in water
Storage:	Desiccate at -20°C
Peptide Sequence:	Glp-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Phe

2. ANALYTICAL DATA

HPLC:	Shows 98.3% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala			Lys	1.00	1.01
Arg	2.00	1.99	Met	1.00	0.98
Asx			Phe	1.00	1.01
Cys			Pro	3.00	3.01
Glx	1.00	1.06	Ser	1.00	0.80
Gly	1.00	1.01	Thr		
His	1.00	1.00	Trp		
Ile			Tyr		
Leu	1.00	0.95	Val		

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Name: **[Pyr[1]]-Apelin-13**

Catalog No.: 2420 **Batch No.: 7**

CAS Number: 217082-60-5

Description:

Highly potent pyroglutamyl form of apelin-13. Endogenous ligand for apelin APJ receptor (EC_{50} = 0.37 nM) that displays potent vascular effects in vivo.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{69}H_{108}N_{22}O_{16}S$

Batch Molecular Weight: 1533.81

Physical Appearance: White lyophilised solid

Peptide Sequence:

Glp-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Phe

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 1 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: 73.2% (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 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:

Kagiyama *et al* (2005) Central and peripheral cardiovascular actions of apelin in conscious rats. Regul.Pept. ***125*** 55. PMID: 15582714.

Kleinz *et al* (2005) Emerging roles of apelin in biology and medicine. Pharmacol.Ther. ***107*** 198. PMID: 15907343.

Katugampola *et al* (2001) [^{125}I]-(Pyr^{1})Apelin-13 is a novel radioligand for localizing the APJ orphan receptor in human and rat tissues with evidence for a vasoconstrictor role in man. Br.J.Pharmacol. ***132*** 1255. PMID: 11250876.