PRODUCT INFORMATION

(Glp1)-Apelin-13 (trifluoroacetate salt)

Item No. 15590

Formal Name: 5-oxo-L-prolyl-L-arginyl-L-prolyl-L-arginyl-L-leucyl-L-seryl-L-histidyl-L-lysylglycyl-L-prolyl-L-methionyl-L-prolyl-L-phenylalanine, trifluoroacetate salt

Synonyms: (pGlu[1])Apelin-13, Pyr-Apelin-13, (Pyr[1])Apelin-13

Peptide Sequence: XRPRLSHKGPMPF
(Modifications: X = pGlu)

pGlu—Arg—Pro—Arg—Leu—Ser—His—Lys—Gly—Pro—Met—Pro—Phe • XCF_3COOH

MF: $C_{69}H_{108}N_{22}O_{16}S \bullet XCF_3COOH$

FW: 1,533.8

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

(Glp1)-Apelin-13 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the (Glp1)-apelin-13 (trifluoroacetate salt) in water. The solubility of (Glp1)-apelin-13 (trifluoroacetate salt) in water is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

The apelin gene encodes a pre-proprotein that is processed to generate bioactive peptides consisting of 36, 17, or 13 amino acids: apelin-36 (Item No. 13524), apelin-17, and apelin-13 (Item No. 13523), respectively. Apelin-13 is an endogenous ligand of the APJ receptor, activating this G protein-coupled receptor with an EC_{50} value of 0.37 nM.[1-2] (Glp1)-Apelin-13 is a pyroglutamylated form of apelin-13, in that the N-terminal glutamine residue is cyclized to pyroglutamic acid. Like apelin-13, this compound is a potent APJ receptor agonist (EC_{50} = 0.30 nM).[1] (Glp1)-Apelin-13 is the major apelin isoform in the plasma of healthy human subjects.[3] It can have vasoconstrictor and antipyretic effects *in vitro* and *in vivo*.[4-6]

References

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2. Lee, D.K., Cheng, R., Nguyen, T., *et al*. Characterization of apelin, the ligand for the APJ receptor. *J. Neurochem.* **74**, 34-41 (2000).
3. Zhen, E.Y., Higgs, R.E., and Gutierrez, J.A. Pyroglutamyl apelin-13 identified as the major apelin isoform in human plasma. *Anal. Biochem.* **442(1)**, 1-9 (2013).
4. Katugampola, S.D., Maguire, J.J., Matthewson, S.R., *et al*. [^{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(6)**, 1255-1260 (2001).
5. Kagiyama, S., Fukuhara, M., Matsumura, K., *et al*. Central and peripheral cardiovascular actions of apelin in conscious rats. *Regul. Pept.* **125(1-3)**, 55-59 (2005).
6. Hatzelmann, T., Harden, L.M., Roth, J., *et al*. Antipyretic effect of central [Pyr[1]]apelin13 on LPS-induced fever in the rat. *Regul. Pept.* **184**, 6-13 (2013).

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