

# PRODUCT INFORMATION



## (Glp1)-Apelin-13 (trifluoroacetate salt)

Item No. 15590

<b>Formal Name:</b>	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	
<b>Synonyms:</b>	(pGlu <sup>1</sup> )Apelin-13, Pyr-Apelin-13, (Pyr <sup>1</sup> )Apelin-13	pGlu—Arg—Pro—Arg—Leu—Ser—His—Lys—Gly—Pro—Met—Pro—Phe
<b>Peptide Sequence:</b>	XRPRLSHKGPMPF	
	(Modifications: X = pGlu)	
<b>MF:</b>	C <sub>69</sub> H <sub>108</sub> N <sub>22</sub> O <sub>16</sub> S • XCF <sub>3</sub> COOH	• XCF <sub>3</sub> COOH
<b>FW:</b>	1,533.8	
<b>Purity:</b>	≥95%	
<b>Supplied as:</b>	A solid	
<b>Storage:</b>	-20°C	
<b>Stability:</b>	≥4 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<sub>50</sub> value of 0.37 nM.<sup>1-2</sup> (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<sub>50</sub> = 0.30 nM).<sup>1</sup> (Glp1)-Apelin-13 is the major apelin isoform in the plasma of healthy human subjects.<sup>3</sup> It can have vasoconstrictor and antipyretic effects *in vitro* and *in vivo*.<sup>4-6</sup>

### References

1. Tatemoto, K., Hosoya, M., Habata, Y., *et al.* Isolation and characterization of a novel endogenous peptide ligand for the human APJ receptor. *Biochem. Biophys. Res. Commun.* **251(2)**, 471-476 (1998).
2. Lee, D.K., Cheng, R., Nguyen, T., *et al.* Characterization of apelin, the ligand for the APJ receptor. *J. Neurochem.* **74(1)**, 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.* [<sup>125</sup>I]-(Pyr<sup>1</sup>)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<sup>1</sup>]apelin13 on LPS-induced fever in the rat. *Regul. Pept.* **184**, 6-13 (2013).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897  
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM