# PRODUCT INFORMATION

## Apelin-36 (trifluoroacetate salt)

*Item No. 13524*

**Formal Name:** L-leucyl-L-valyl-L-glutaminyl-L-prolyl-L-arginylglycyl-L-seryl-L-arginyl-L-asparaginylglycyl-L-prolylglycyl-L-prolyl-L-tryptophyl-L-glutaminylglycylglycyl-L-arginyl-L-arginyl-L-lysyl-L-phenylalanyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-prolyl-L-arginyl-L-leucyl-L-seryl-L-histidyl-L-lysylglycyl-L-prolyl-L-methionyl-L-prolyl-L-phenylalanine, trifluoroacetate salt

**Peptide Sequence:** LVQPRGSRNGPGPWQGGRRKFRRQRPRLSHKGPMPF

**MF:** $C_{184}H_{297}N_{69}O_{43}S \bullet XCF_3COOH$

**FW:** 4,195.8

**Purity:** ≥95%

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥4 years

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

### Laboratory Procedures

Apelin-36 (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the apelin-36 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Apelin-36 (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of apelin-36 (trifluoroacetate salt) in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of apelin-36 (trifluoroacetate salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of apelin-36 (trifluoroacetate salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Apelin-36 is the full-length mature peptide produced from the translated 77 amino acid prepropeptide. The apelins act primarily in the peripheral and central nervous system, playing important roles in regulating cardiovascular function, fluid homeostasis, hypertension, and insulin sensitivity.[1] Apelin-36 is a less potent agonist of APJ than either apelin-17 or apelin-13 ($EC_{50}$ = 20, 2.5, and 0.37 nM, respectively).[2,3] Apelin-36 potently inhibits HIV-1 entry into cells expressing APJ and CD4, limiting HIV infection.[4]

### References


1. Kleinz, M.J. and Davenport, A.P. Emerging roles or apelin in biology and medicine. *Pharmacol. Ther.* **107**, 198-211 (2005).
2. Tatemoto, K., Hosoya, M., Habata, Y., *et al.* Isolation and characterizaton of a novel endogenous peptide ligand for the human APJ receptor. *Biochem. Biophys. Res. Commun.* **251(2)**, 471-476 (1998).
3. 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).
4. Zou, M.X., Liu, H.Y., Haraguchi, Y., *et al.* Apelin peptides block the entry of human immunodeficiency virus (HIV). *FEBS Lett.* **473(1)**, 15-18 (2000).





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