

PRODUCT INFORMATION



MM-54 (trifluoroacetate salt)

Item No. 42401

Formal Name: L-cysteinyl-L-arginyl-L-prolyl-L-arginyl-L-leucyl-L-cysteinyl-L-lysyl-L-histidyl-L-cysteinyl-L-arginyl-L-prolyl-L-arginyl-L-leucyl-L-cysteine, cyclic (1→6),(9→14)-bis(disulfide), trifluoroacetate salt

Peptide Sequence: cyclic[CRPRLC]-KH-cyclic[CRPRLC]-OH

MF: $C_{70}H_{121}N_{29}O_{15}S_4 \cdot XCF_3COOH$

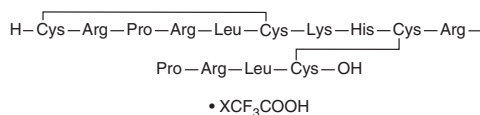
FW: 1,737.2

Purity: ≥95%

Supplied as: A 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

MM-54 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the MM-54 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. MM-54 (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

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 MM-54 (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. MM-54 (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

MM-54 is a peptide antagonist of the apelin receptor (APJ; $K_i = 82 \text{ nM}$).¹ It inhibits apelin-13-induced increases in numbers of stem cells and tumorspheres and the percentage of cells with aldehyde dehydrogenase (ALDH) activity, a marker of stem cells, in patient-derived glioblastoma spheroids when used at a concentration of 100 μM .¹ MM-54 (2 mg/kg twice per week) decreases tumor volume in a patient-derived xenograft (PDX) mouse model of glioblastoma.

References

1. Macaluso, N.J., Pitkin, S.L., Maguire, J.J., *et al.* Discovery of a competitive apelin receptor (APJ) antagonist. *ChemMedChem* **6**(6), 1017-1023 (2011).
2. Harford-Wright, E., Andre-Gregoire, G., Jacobs, K.A., *et al.* Pharmacological targeting of apelin impairs glioblastoma growth. *Brain* **40**(11), 2939-2954 (2017).

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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