

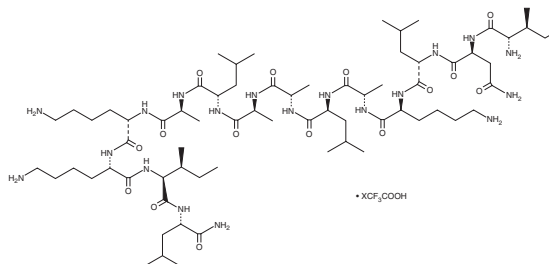
PRODUCT INFORMATION



Mastoparan (trifluoroacetate salt)

Item No. 20240

MF: C₇₀H₁₃₁N₁₉O₁₅ • XCF₃COOH
FW: 1,478.9
Purity: ≥95%
UV/Vis.: λ_{max}: 203 nm
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

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

Mastoparan (trifluoroacetate salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, mastoparan (trifluoroacetate salt) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Mastoparan (trifluoroacetate salt) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Mastoparan is a mast cell degranulating peptide originally isolated from Vespid wasp venom.¹ It promotes degranulation by increasing GTPase activity for G_i and G_o signaling independent of G protein-coupled receptor binding.^{2,3} Mastoparan also binds calmodulin (K_d = 0.3 nM) and inhibits the calmodulin-induced activation of phosphodiesterase (IC₅₀ = 0.02 μM).^{4,5} *In vitro*, mastoparan was effective in killing leukemia, myeloma, and breast cancer cells (IC₅₀s = 8-9.2, 11, and 20-24 μM, respectively).⁶ It worked synergistically with gemcitabine in a mouse model of mammary carcinoma.⁶

References

1. Hirai, Y., Yashuhara, T., Yoshida, H., et al. *Chem. Pharm. Bull. (Tokyo)* **27(8)**, 1942-1944 (1979).
2. Higashijima, T., Uzu, S., Nakajima, T., et al. *J. Biol. Chem.* **263(14)**, 6491-6494 (1988).
3. Higashijima, T., Burnier, J., and Ross, E.M. *J. Biol. Chem.* **265(24)**, 14176-14186 (1990).
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5. Barnette, M.S., Daly, R., and Weiss, B. *Biochem. Pharmacol.* **32(19)**, 2929-2933 (1983).
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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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