

PRODUCT INFORMATION



Met-Enkephalinamide (trifluoroacetate salt)

Item No. 36081

Formal Name: L-tyrosylglycylglycyl-L-phenylalanyl-L-methioninamide, trifluoroacetate salt

Synonyms: [Met⁵]-Enkephalin amide, Methionine-Enkephalin amide, H-Tyr-Gly-Gly-Phe-Met-NH₂, H-YGGFM-NH₂

MF: C₂₇H₃₆N₆O₆S • XCF₃COOH

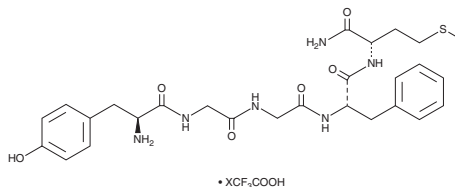
FW: 572.7

Purity: ≥98%

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

Met-Enkephalinamide (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the Met-enkephalinamide (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Met-Enkephalinamide (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of Met-enkephalinamide (trifluoroacetate salt) in these solvents is approximately 3, 10, and 2 mg/ml, respectively.

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 Met-enkephalinamide (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of Met-enkephalinamide (trifluoroacetate salt) in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Met-Enkephalinamide is a peptide opioid receptor agonist and derivative of Met-enkephalin (Item No. 23284).^{1,2} It binds to opioid receptors in rat cerebellum homogenates (IC₅₀ = 0.2 μM) and reduces the twitch height in electrically stimulated isolated guinea pig ileum and isolated mouse vas deferens. Met-Enkephalinamide (300 μg/animal) induces analgesia in the hot plate and tail-flick tests in rats, effects that can be reversed by administration of the opioid receptor antagonist naloxone.³

References

1. Change, J.-K. and Fong, B.T.W. Opiate receptor affinities and behavioral effects of enkephalin: Structure-activity relationship of ten synthetic peptide analogues. *Life Sci.* **18(12)**, 1473-1481 (1976).
2. Quinn, M.J., Laska, F.J., and Fennessy, M.R. Structure-activity relationships of met⁵- and leu⁵-enkephalin analogues *Clin. Exp. Pharmacol. Physiol.* **6**, 535-540 (1979).
3. Yaksh, T.L., Huang, S.P., and Rudy, T.A. The direct and specific opiate-like effect of Met⁵-enkephalin and analogues on the spinal cord. *Neuroscience* **2(4)**, 593-596 (1977).

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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