

PRODUCT INFORMATION



Hemokinin 1 (mouse, rat) (trifluoroacetate salt)

Item No. 43053

Formal Name: L-arginyl-L-seryl-L-arginyl-L-threonyl-L-arginyl-L-glutamyl-L-phenylalanyl-L-tyrosylglycyl-L-leucyl-L-methioninamide, trifluoroacetate salt

Synonym: Arg-Ser-Arg-Thr-Arg-Gln-Phe-Tyr-Gly-Leu-Met-NH₂

Peptide Sequence: RSRTRQFYGLM-NH₂

MF: C₆₁H₁₀₀N₂₂O₁₅S • XCF₃COOH

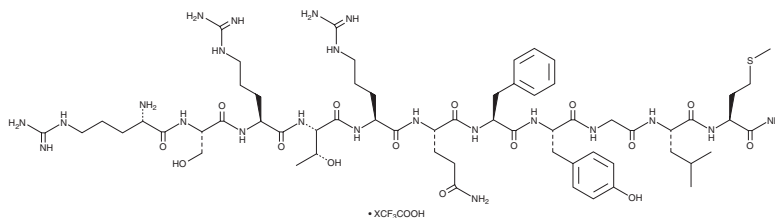
FW: 1,413.7

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

Hemokinin 1 (mouse, rat) (trifluoroacetate salt) is supplied as a solid. Aqueous solutions of hemokinin 1 (mouse, rat) (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. Hemokinin 1 (mouse, rat) (trifluoroacetate salt) is slightly soluble (0.1-1 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Hemokinin 1 is an 11-amino acid tachykinin neuropeptide with roles in pain transmission and inflammation and is a neurokinin-1 (NK₁) receptor agonist.^{1,2} It is primarily expressed in immune cells and, to a lesser extent, in the brain.³ Hemokinin 1 binds to NK₁ receptors (K_i = 0.175 nM) and induces contractions in isolated rat urinary bladder (EC₅₀ = 100 nM).¹ Knockdown of *Tac4*, the gene encoding hemokinin 1, inhibits neurogenic inflammation-induced mechanical and thermal hypersensitivity and visceral nocifensive behavior in mice.³ *Tac4*^{-/-} mice also exhibit impaired inflammatory responses to intranasal administration of *E. coli* LPS.⁴

References

1. Bellucci, F., Carini, F., Catalani, C., *et al.* Pharmacological profile of the novel mammalian tachykinin, hemokinin 1. *Br. J. Pharmacol.* **135**(1), 266-274 (2002).
2. Agaeva, G.A., Agaeva, U.T., and Godjaev, N.M. The spatial organization of the human hemokinin-1 and mouse/rat hemokinin-1 molecules. *Biophysics* **60**(3), 365-377 (2015).
3. Hunyady, Á., Hajna, Z., Gubányi, T., *et al.* Hemokinin-1 is an important mediator of pain in mouse models of neuropathic and inflammatory mechanisms. *Brain Res. Bull.* **147**, 165-173 (2019).
4. Hajna, Z., Borbély, É., Kemény, Á., *et al.* Hemokinin-1 is an important mediator of endotoxin-induced acute airway inflammation in the mouse. *Peptides* **64**, 1-7 (2015).

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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