

PRODUCT INFORMATION



BAM-22P (8-22) (human, mouse, rat, bovine) (trifluoroacetate salt)

Item No. 35263

Formal Name: L-valylglycyl-L-arginyl-L-prolyl-L- α -glutamyl-L-tryptophyl-L-tryptophyl-L-methionyl-L- α -aspartyl-L-tyrosyl-L-glutamyl-L-lysyl-L-arginyl-L-tyrosyl-glycine, trifluoroacetate salt

Synonyms: BAM 8-22, Bovine Adrenal Medulla 8-22

MF: C₉₁H₁₂₇N₂₅O₂₃S • XCF₃COOH

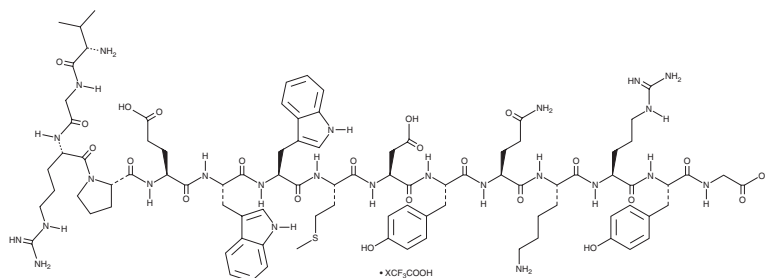
FW: 1,971.2

Purity: \geq 95%

Supplied as: A solid

Storage: -20°C

Stability: \geq 4 years



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

Laboratory Procedures

BAM-22P (8-22) (human, mouse, rat, bovine) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the BAM-22P (8-22) (human, mouse, rat, bovine) (trifluoroacetate salt) in water. The solubility of BAM-22P (8-22) (human, mouse, rat, bovine) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

BAM-22P (8-22) is an endogenous neuropeptide derived from proenkephalin A and an agonist of MAS-related G protein-coupled receptor family member X1 (MRGPRX1), previously known as sensory neuron-specific G protein-coupled receptor 4 (SNSR4).¹ It is involved in prurition and nociception. BAM-22P (8-22) induces calcium mobilization in HEK293S cells expressing human MRGPRX1 or SNSR3 (EC₅₀s = 14 and 28 nM, respectively) and inhibits voltage-induced calcium currents in isolated rat neurons expressing human MRGPRX1 (EC₅₀ = 0.6 μ M).² Intrathecal administration of BAM-22P (8-22) (30 nmol/animal) decreases the tail-flick latency in rats stimulated with the G α_i inhibitor pertussin toxin and increases the tail-flick latency in rats stimulated with the phospholipase C (PLC) inhibitor U-73122, indicating changes in pain sensitivity.³ BAM-22P (8-22) (100 μ g/animal) increases scratching behavior in wild-type mice and enhances bile-duct ligation-induced scratching behavior in a mouse model of cholestasis.⁴

References

1. Lembo, P.M.C., Grazzini, E., Groblewski, T., *et al.* Proenkephalin A gene products activate a new family of sensory neuron-specific GPCRs. *Nat. Neurosci.* **5**(3), 201-209 (2002).
2. Chen, H. and Ikeda, S.R. Modulation of ion channels and synaptic transmission by a human sensory neuron-specific G-protein-coupled receptor, SNSR4/mrgX1, heterologously expressed in cultured rat neurons. *J. Neurosci.* **24**(21), 5044-5053 (2004).
3. Chen, T., Wang, D., and Hong, Y. Dual modulation effects of Mas-related gene (Mrg) receptors on pain sensitivity in rats. *Neurosci. Lett.* **514**(1), 82-85 (2012).
4. Sanjel, B., Maeng, H.-J., and Shim, W.-S. BAM8-22 and its receptor MRGPRX1 may attribute to cholestatic pruritus. *Sci. Rep.* **9**(1), 10888 (2019).

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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