

Product Data Sheet

Product Name: BAM 22P

Cat. No.: GC11390

Chemical Properties

Cas. No. 76622-26-9

Chemical Name (3Z,5S,6Z,8S,9Z,11S,12Z,14S,15Z,17S,18Z,20S,21Z,23S,24Z,26S,27Z,29S,30Z,32S)-26,29-bis((1H-indol-3-yl)methyl)-32-((Z)-((S)-1-

Name ((2S,3Z,6Z,8S,9Z,11S,12Z,14S,15Z,17S,18Z,20S,21Z,24Z,27Z,29S)-29-amino-20-benzyl-2,11,14-tris(3-guanidinopropyl)-4,7,10,13,16,19,

SMILES CC([C@@])(/N=C(O)/[C@]/N=C(O)/[C@]/N=C(O)/[C@]/N=C(O)/[C@]/N=C(O)/C/N=C(O)/C/N=C(O)/[C@](N)([H])CC1=CC=C(O)C=C1([H])CC2=CC=CC=C2)([H])CCSC([H])CCCNC(N)=N)([H])CCCNC(N)=N([H])/C(O)=N/C/C(O)=N/[C@@](C(N3CCC[C@@]3([H])/C(O)=N/[C@@]/C(O)=N/[C@@]/C(O)=

Formula C₁₃₀H₁₈₄N₃₈O₃₁S₂ M.Wt 2839.22

Solubility Soluble to 1 mg/ml in Water Storage Desiccate at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Background

IC50: 1.3 nM for opiate activity

Bovine adrenal medulla 22 peptide (BAM22P) is a peptide with 22 amino acids which is one of the cleavage products of proenkephalin A, the precursor of Leu- and Met-enkephalin, in the adrenal medulla, with very potent opiate activity.

In vitro: In the guinea-pig ileum assay, BAM-22P has been shown to have typical and extraordinarily potent opioid activities antagonized by naloxone. The potency of BAM-22P is 26 times that of Met-enkephalin and 22 times that of B hendorphin. IC50 value of BAM-22P in this tissue, 1.3 nM, makes it the most potent Met-enkephalin relatives that discovered so far. [1].

In vivo: Intrathecal (i.t.) administration of BAM22 decreased nocifensive behavior scores, which

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measured as the sum of flinching and lifting/licking, in the first and second phases of the formalin test. Such decrease was partially attenuated by systemic injection of naloxone. [2].

Clinical trial: Up to now, BAM 22P is still in the preclinical development stage.

Reference:

[1] Mizuno K, Minamino N, Kangawa K, Matsuo H. A new family of endogenous "big" Met-enkephalins from bovine adrenal medulla: purification and structure of docosa- (BAM-22P) and eicosapeptide (BAM-20P) with very potent opiate activity. *Biochem Biophys Res Commun*. 1980 Dec 31;97(4):1283-90.

[2] Hong Y, Dai P, Jiang J, Zeng X. Dual effects of intrathecal BAM22 on nociceptive responses in acute and persistent pain--potential function of a novel receptor. *Br J Pharmacol*. 2004 Feb;141(3):423-30.

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