

Product Data Sheet

Chemical Properties

Product Name: Methylnaltrexone Bromide

Cas No.: 73232-52-7

M.Wt: 436.34

Formula: C₂₁H₂₆BrNO₄

Synonyms: Relistor

Chemical Name: (4R,4aS,7aR,12bS)-3-(cyclopropylmethyl)-4a,9-dihydroxy-3-methyl-2,4,5,6,7a,13-hexahydro-1H-4,12-methanobenzofuro[3,2-e]isoquinoline-3-ium-7-one;bromide

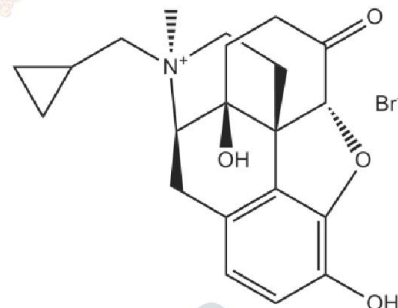
Canonical SMILES: C[N+](CCCC2C4C(=O)CCC2(C1CC5=C3C(=C(C=C5)O)O4)O)CC6CC6.[Br-]

Solubility: Soluble in Water

Storage: Store 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.

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



Biological Activity

Targets : Endocrinology and Hormones

Pathways: Opioid Receptor

Description:

Methylnaltrexone Bromide is an antagonist of mu-opioid receptors (MOR) with IC₅₀ value of 75nM.

MOR are a class of opioid receptors with high affinity for enkephalins and beta-endorphin but low affinity for dynorphins. Activation of MOR in the intestinal tract inhibits peristaltic action which

causes constipation [1].

In patients with constipation, Methylnaltrexone Bromide plus standard care relieved the constipation symptoms with less time (38 days) and improved quality life of 0.02 years or 8.8 days [1]. Methylnaltrexone is a novel MOR antagonist, which does not pass the blood brain barrier. In the first two weeks of usage, Methylnaltrexone Bromide caused laxation in less than 24 hours for at least half of those patients without impairing pain control or causing serious adverse effects. In phase II studies, all 22 patients had fast laxation [2].

Reference:

[1]. Earnshaw SR, Klok RM, Iyer S, et al. Methylnaltrexone bromide for the treatment of opioid-induced constipation in patients with advanced illness--a cost-effectiveness analysis. *Aliment Pharmacol Ther*, 2010, 31(8): 911-921.

[2]. Bader S, Jaroslowski K, Blum HE, et al. Opioid-induced constipation in advanced illness: safety and efficacy of methylnaltrexone bromide. *Clin Med Insights Oncol*, 2011, 5: 201-211.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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