
Product Data Sheet

Product Name: Methylnaltrexone Bromide

Cat. No.: GC16177

Chemical Properties

Cas. No. 73232-52-7

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

SMILES C[N+]1(CCC23C4C(=O)CCC2(C1CC5=C3C(=C(C=C5)O)O4)O)CC6CC6.[Br-]Formula C₂₁H₂₆BrNO₄

M.Wt

436.34

Solubility PBS (pH 7.2): 10 mg/ml

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.

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

Structure **Background**

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].

References:

Caution: Product has not been fully validated for medical applications. For research use only.

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[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.

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