
Product Data Sheet

Product Name: Alvimopan monohydrate

Cat. No.: GC35311

Chemical Properties

Cas. No. 1383577-62-5

SMILES OC1=CC=CC([C@@]2(C)[C@@H](C)CN(C[C@H](CC3=CC=CC=C3)C(NCC(O)=O)=O)CC2)=C1.O

Formula	C ₂₅ H ₃₄ N ₂ O ₅	M.Wt	442.55
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Solubility	Soluble in DMSO	Storage	Store at -20°C
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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**

Alvimopan is a μ -opioid receptor antagonist ($K_i = 0.47$ nM).¹ It is selective over the κ - and δ -opioid receptors ($K_{i\delta} = 100$ nM and 12 nM, respectively). Alvimopan inhibits μ -opioid receptor-mediated GTP binding to CHO cell membranes with an IC_{50} value of 1.7 nM. It inhibits morphine-induced slowing of colorectal transit in mice with an ED_{50} value of 0.41 mg/kg.² Alvimopan (0.3 and 1 mg/kg, p.o.) reduces inhibition of gastrointestinal (GI) transit induced by morphine, but not apraclonidine , in rats. Formulations containing alvimopan have been used in the treatment of opioid-induced bowel dysfunction.

1. Le Bourdonnec, B., Barker, W.M., Belanger, S., et al. Novel trans-3,4-dimethyl-4-(3-hydroxyphenyl)piperidines as μ opioid receptor antagonists with improved opioid receptor selectivity profiles *Bioorg. Med. Chem. Lett.* 18(6)2006-2012(2008)

2. Greenwood-Van Meerveld, B., Gardner, C.J., Little, P.J., et al. Preclinical studies of opioids and opioid antagonists on gastrointestinal function *Neurogastroenterol. Motil.* 16(Suppl. 2)46-53(2004)

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

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