**Product Data Sheet**

**Chemical Properties**

**Product Name:** Alvimopan dihydrate

**Cas No.:** 170098-38-1

**M.Wt:** 460.56

**Formula:** C25H36N2O6

**Synonyms:** LY 246736 dihydrate; ADL 8-2698 dihydrate

**Chemical Name:** 2-[(2S)-2-benzyl-3-[(3R,4R)-4-(3-hydroxyphenyl)-3,4-dimethylpiperidin-1-yl]propanoyl]amino]acetic acid; dihydrate

**Canonical SMILES:** CC1CN(CCC1(C)C2=CC(=CC=C2)O)CC(CC3=CC=CC=C3)C(=O)NCC(=O)O.O.O

**Solubility:** Soluble in DMSO

**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:**

Alvimopan dihydrate is a selective antagonist of opioid receptor with IC50 value of 1.7 nM. Opioid receptor is a G protein-coupled receptor with opioids as ligands. The dissociation rate of alvimopan from the micro opioid receptor (t(1/2) = 30-44 min) was slower than those of the antagonists N-methylnaloxone (t(1/2) = 0.46 min) and naloxone (t(1/2) = 0.82 min).
min), and was similar to that of the long acting partial agonist buprenorphine (t(1/2)=44 min). When preincubation with the micro opioid receptor, the affinity and potency of alvimopan increased apparently, which is consistent with its long duration of action [1]. Patients with opioid induced bowel dysfunction (OBD) orally received alvimopan 0.5 mg twice daily (BID), 1 mg once daily (QD), 1 mg BID, or placebo for 6 weeks. Alvimopan significantly increased spontaneous bowel movements (SBMs) frequency each week in the last three weeks with alvimopan 0.5 mg BID (+1.71 mean SBMs/week), alvimopan 1 mg QD (+1.64) and alvimopan 1 mg BID (+2.52), respectively. While, Alvimopan caused side effects such as abdominal pain, nausea, and diarrhea, which was the same as the placebo. Alvimopan restored GI function and relieved OBD without affecting analgesia [2].

Reference:

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. Short-term 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.