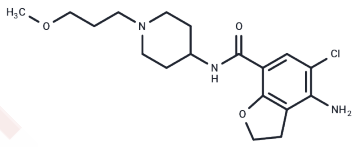
Data Sheet (Cat.No.T2542)

TargetMol

Prucalopride

Chemical Properties



CAS No. : 179474-81-8

Formula: C18H26ClN3O3

Molecular Weight: 367.87

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Prucalopride (R-93877) is a selective, high-affinity 5-HT4A/4B receptor agonist (Ki: 2.5/8 nM). It has >290-fold selectivity for 5-HT4A/4B receptor than other 5-HT receptor subtypes.
Targets(IC50)	Apoptosis,5-HT Receptor,Autophagy
In vitro	Administration of prucalopride at dosages of 2/4 mg resulted in complete spontaneous bowel movements per week at rates of 30.9% and 28.4%, respectively, compared to 12.0% in the placebo group. Patients treated with 2 mg of prucalopride (47.3%) and those receiving 4 mg (46.6%) experienced an increase in the frequency of spontaneous bowel movements, with an average of one or more complete bowel movements per week, versus 25.8% in the placebo group. Prucalopride (2/4 mg) significantly enhanced other secondary efficacy endpoints, including patient satisfaction with their bowel functions and treatment, as well as their perception of the severity of constipation symptoms. At a dosage of 4 mg/day, prucalopride accelerated overall gastric emptying and small intestinal transit without causing intestinal evacuation disorders. It also sped up overall colonic transit and increased the colonic emptying rate.
In vivo	Prucalopride (1 mM) significantly amplifies the rebound contraction of the guinea pig's proximal colon following electrical stimulation. It induces contractions in a concentration-dependent manner (pEC50: 7.5). Additionally, Prucalopride induces relaxation in the muscularis mucosae of the rat esophagus (pEC50: 7.8), demonstrating a monophasic concentration-response curve.

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble), Ethanol: 36 mg/mL (97.86 mM),Sonication is recommended. DMSO: 56 mg/mL (152.23 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7184 mL	13.5918 mL	27.1835 mL
5 mM	0.5437 mL	2.7184 mL	5.4367 mL
10 mM	0.2718 mL	1.3592 mL	2.7184 mL
50 mM	0.0544 mL	0.2718 mL	0.5437 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Briejer MR, et al. Eur J Pharmacol, 2001, 423(1), 71-83.
Camilleri M, et al. N Engl J Med, 2008, 358(22), 2344-2354.
Bouras EP, et al. Gastroenterology, 2001, 120(2), 354-360.
Tack J, et al. Gut, 2009, 58(3), 357-365.
Briejer MR, et al. Neurogastroenterol Motil, 2001, 13(5), 465-472.