Product Data Sheet

Product Name: Picoprazole
Cat. No.: GC31466

Chemical Properties

Cas. No.	78090-11-6		
SMILES	O=C(C1=C(C)C=C2N=C(S(CC3=NC=CC=C3C)=O)NC2=C1)OC		
Formula	$C_{17}H_{17}N_3O_3S$	M.Wt	343.4
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Picoprazole		

Background

Picoprazole is a specific inhibitor of H+/K+-ATPase with IC50 of 3.1±0.4 μM.

Picoprazole inhibits the H+/K+-ATPase activity in a concentration-dependent manner. The IC50 value is 3.1±0.4 μM[1]. Picoprazole is a specific inhibitor of H+/K+-ATPase and binds to 100-kDa polypeptides of the enzyme, dose dependently inhibited opening of the Cl- conductance by Cu2+-o-phenanthroline, indicating that the Cl- conductance is part of the function of the H+/K+-ATPase[2]. The inhibitory effect of the three benzimidazole derivatives Timoprazole, Picoprazole, and Omeprazole on histamine and dbcAMP stimulated 14C-aminopyrine accumulation (H+ secretion) has been studied in isolated and enriched guinea-pig parietal cells. All compounds tested inhibit H+ secretion in a concentration dependent manner with IC50 values of 8.5±1.9 μM for Timoprazole, 3.9±0.7 μM for Picoprazole, and 0.13±0.03 μM for Omeprazole[3].

[1]. Beil W, et al. Inhibition of partially purified H+/K+-ATPase from guinea-pig isolated and enriched parietal cells by substituted benzimidazoles. Br J Pharmacol. 1984 Jul;82(3):651-7. [2]. Takeguchi N, et al. Disulfide cross-linking of H,K-ATPase opens Cl-conductance, triggering proton uptake in gastric vesicles. Studies with specific inhibitors.

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J Biol Chem. 1986 Feb 25;261(6):2560-6. [3]. Sewing KF, et al. Effect of substituted benzimidazoles on acid secretion in isolated and enriched guinea pig parietal cells. Gut. 1983 Jun;24(6):557-60.

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