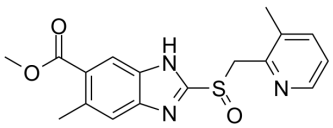
Picoprazole

Cat. No.:	HY-15384
CAS No.:	78090-11-6
Molecular Formula:	$C_{17}H_{17}N_3O_3S$
Molecular Weight:	343.4
Target:	Proton Pump
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Picoprazole is a specific inhibitor of H^+/K^+-ATPase with IC_{50} of 3.1±0.4 μM.
IC_{50} & Target	IC50: 3.1±0.4 μM (H^+/K^+-ATPase)[1]
In Vitro	Picoprazole inhibits the H^+/K^+-ATPase activity in a concentration-dependent manner. The IC_{50} 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 Cu^{2+}-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 ^{14}C-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 IC_{50} 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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[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. 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.

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

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