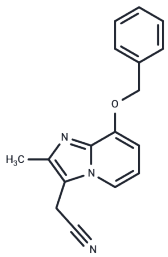
Data Sheet (Cat.No.T16865)

TargetMol

SCH28080

Chemical Properties



CAS No. : 76081-98-6

Formula: C17H15N3O

Molecular Weight: 277.32

Storage: 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	SCH28080 is a reversible and K+-competitive inhibitor of gastric H+/K+-ATPase with an IC50 value of 20 nM (rabbit microsomal membrane).SCH28080 is a potent inhibitor of acid secretion in vivo with anti-ulcer activity, anti-secretory and cytoprotective activity.
Targets(IC50)	ATPase,Proton pump
In vitro	SCH28080 competitively hinders ATP hydrolysis stimulated by K+, with a Ki value of 0.12 μM.[1] SCH28080 effectively suppresses histamine-induced uptake of [14C]aminopyrine in isolated rabbit parietal cells, demonstrating an IC50 of 0.029 μM.[1] SCH28080 elicits a dose-dependent decrease in cell viability, with IC50 values of 22.9 μM and 15.3 μM following 2-hour and 24-hour treatments, respectively. And at concentration of 100 μM, cell viability drops below 10% as early as 2 hours.[2] SCH28080 induces apoptosis and exhibits cytotoxicity at higher doses.[2]. SCH28080 also impedes insulin secretion by activating IK ATP and inhibiting L-type voltage-gated Ca2+ channels, ultimately reducing cell viability and induces apoptosis/necrosis in a dose-dependent manner.[2]
In vivo	SCH28080 (20 mg/kg; i.p.) effectively reduces gastric ulcers induced by pylorus ligation in rats.[3]

Solubility Information

Solubility	DMSO: 90 mg/mL (324.53 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (11.9 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6059 mL	18.0297 mL	36.0594 mL
5 mM	0.7212 mL	3.6059 mL	7.2119 mL
10 mM	0.3606 mL	1.803 mL	3.6059 mL
50 mM	0.0721 mL	0.3606 mL	0.7212 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

Scott CK, et al. Studies on the mechanism of action of the gastric microsomal (H+ + K+)-ATPase inhibitors SCH 32651 and SCH 28080. Biochem Pharmacol. 1987;36(1):97-104.
Jakab M, et al. The H+/K+ ATPase Inhibitor SCH-28080 Inhibits Insulin Secretion and Induces Cell Death in INS-1E Rat Insulinoma Cells. Cell Physiol Biochem. 2017;43(3):1037-1051.
Hamagishi Y, et al. Inhibitory effects of copiamycin A, a macrocyclic lactone antibiotic, on gastric H+,K(+)-ATPase, acid secretion and ulcer formation. Jpn J Pharmacol. 1991;55(2):283-286.
Long JF, et al. Gastric antisecretory and cytoprotective activities of SCH 28080. J Pharmacol Exp Ther. 1983;226(1): 114-120.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481