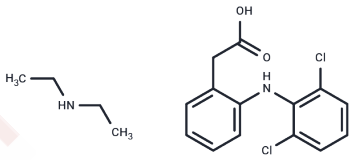
Data Sheet (Cat.No.T0432)

TargetMol

Diclofenac diethylamine

Chemical Properties



CAS No. : 78213-16-8

Formula: C18H22Cl2N2O2

Molecular Weight: 369.29

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Diclofenac Diethylamine, a non-selective COX inhibitor, is utilized as a nonsteroidal anti-inflammatory drug (NSAID).
Targets(IC50)	Apoptosis,COX
In vitro	The primary mechanism of diclofenac diethylamine responsible for its anti-inflammatory, antipyretic, and analgesic action is thought to be inhibition of prostaglandin synthesis by inhibition of cyclooxygenase (COX). It also appears to exhibit bacteriostatic activity by inhibiting bacterial DNA synthesis. Inhibition of COX also decreases prostaglandins in the epithelium of the stomach, making it more sensitive to corrosion by gastric acid. This is also the main side effect of diclofenac. Diclofenac diethylamine has a low to moderate preference to block the COX2-isoenzyme (approximately 10-fold) and is said to have, therefore, a somewhat lower incidence of gastrointestinal complaints than noted with indomethacin and aspirin.
Kinase Assay	HDAC Activity: HDAC activity is measured using a continuous trypsin-coupled assay. For inhibitor characterization, measurements are done in a reaction volume of 100 µL using 96-well assay plates. For each isozyme, the HDAC protein in reaction buffer [50 mM HEPES, 100 mM KCl, 0.001% Tween 20, 5% DMSO (pH 7.4), supplemented with bovine serum albumin at concentrations of 0% (HDAC1), 0.01% (HDAC2, 3, 8, and 10), or 0.05% (HDAC6)] is mixed with PCI-24781 at various concentrations and allowed to incubate for 15 minutes. Trypsin is added to a final concentration of 50 nM, and acetyl-Gly-Ala-(N-acetyl-Lys)-AMC is added to a final concentration of 25 µM (HDAC1, 3, and 6), 50 µM (HDAC2 and 10), or 100 µM (HDAC8) to initiate the reaction. Negative control reactions are done in the absence of PCI-24781 in replicates of eight. Reactions are monitored in a fluorescence plate reader. After a 30-minute lag time, the fluorescence is measured over a 30-minute time frame using an excitation wavelength of 355 nm and a detection wavelength of 460 nm. The increase in fluorescence with time is used as the measure of the reaction rate. Inhibition constants Ki(app) are obtained using the program BatchKi.

Solubility Information

Solubility	Ethanol: 69 mg/mL (186.85 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 55 mg/mL (148.93 mM),Sonication is recommended.

(< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7079 mL	13.5395 mL	27.079 mL
5 mM	0.5416 mL	2.7079 mL	5.4158 mL
10 mM	0.2708 mL	1.3539 mL	2.7079 mL
50 mM	0.0542 mL	0.2708 mL	0.5416 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.

Reference

Dastidar SG, et al. Int J Antimicrob Agents, 2000, 14(3), 249-251.
Niethard FU, et al. J Rheumatol, 2005, 32(12), 2384-2392.