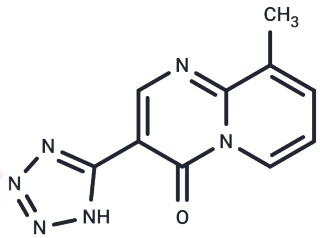
Data Sheet (Cat.No.T60289)

TargetMol

Pemirolast

Chemical Properties



CAS No. : 69372-19-6

Formula: C10H8N6O

Molecular Weight: 228.21

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	Pemirolast is an orally active antiallergic agent that attenuates paclitaxel hypersensitivity reactions by inhibiting the release of sensory neuropeptides, and can be used for bronchial asthma and conjunctivitis research [1] - [5].
Targets(IC50)	Others,Histamine Receptor
In vitro	Pemirolast, at concentrations ranging from 1 μM to 1 mM, dose-dependently inhibits the release of LTC4 and ECP induced by A23187 from eosinophils, as well as PAF-induced and FMLP-induced ECP release at concentrations of 0.1 mM and 1 mM. This action of Pemirolast helps mitigate the activation of human eosinophils, thereby reducing the release of granule proteins LTQ and ECP, which is instrumental in controlling allergic diseases. However, when tested at concentrations between 100 nM and 1 mM for durations of 1 to 15 minutes, Pemirolast does not significantly impact the release of histamine from human conjunctival mast cells. Additionally, Pemirolast, within the range of 0.1 μg/mL to 0.01 mg/mL, blocks the activation of signal transduction phospholipases C and AZ in rat peritoneal mast cells. It achieves this by preventing antigen and compound 48/80 induced degranulation, consequently inhibiting the formation of 1,2-diacylglycerol and phosphatidic acid.
In vivo	Pemirolast effectively mitigates paclitaxel hypersensitivity reactions by hindering the release of sensory neuropeptides in rats. It demonstrates this effect by inhibiting taxel-induced pulmonary vascular hyperpermeability and rectifying the decrease in arterial PaO2 at a dose of 1 mg/kg, half an hour post a 15 mg/kg paclitaxel injection. Additionally, at the same dosage and timing, Pemirolast counteracts the taxel-induced rise in sensory neuropeptides levels (CGRP, substance P, and neurokinin A), providing further evidence of its potent anti-inflammatory properties. In separate studies, oral administration of Pemirolast (10 mg/kg/d for 4-5 days) markedly diminished cisplatin-induced kaolin intake on the third and fourth days, as well as suppressed the release of substance P in the cerebrospinal fluid (CSF) of rats, indicating its efficacy in reducing cisplatin-induced adverse effects without affecting normal feed intake. These outcomes underscore Pemirolast's therapeutic potential in managing chemotherapy-induced complications through modulation of sensory neuropeptide activity.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.3819 mL	21.9096 mL	43.8193 mL
5 mM	0.8764 mL	4.3819 mL	8.7639 mL
10 mM	0.4382 mL	2.191 mL	4.3819 mL
50 mM	0.0876 mL	0.4382 mL	0.8764 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.