Data Sheet (Cat.No.T23164)

PIT

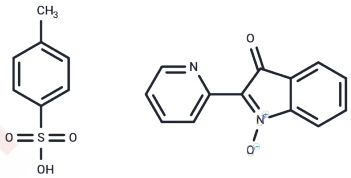
Chemical Properties

CAS No. : 56583-49-4

Formula: C20H16N2O5S

Molecular Weight: 396.42

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	PIT (2,2'-Pyridylisatogen tosylate) is a specific, non-competitive antagonist of the Purinergic receptor P2Y1, exhibiting an IC50 of 0.14 μM for human P2Y1. It does not affect nucleotide binding and is useful in studies related to chronic bronchitis and asthma.
Targets(IC50)	P2Y Receptor
In vitro	PIT (100 nM-10 μM) diminishes human P2Y1 receptor signaling in a non-competitive and dose-dependent manner and dose-dependently blocks the agonist activity of 2-MeSADP [1]. PIT (0.1-3 μM) increases ATP-responses 2-5 fold. PIT (3-100 μM) inhibits ATP-mediated inward current (IC50 = 13.2 μM). PIT shows affinity to adenosine receptor (pKi = 5.3)[2].
In vivo	In mice with S-bromo-willardiine injection induced tonic and tonicoclonic seizures, intraperitoneal injection of PIT (10 mg/kg) prevents the white matter and the cortical plate lesions against the insult[3].

Solubility Information

Solubility	DMSO: 75 mg/mL (189.19 mM),Sonication and heating to 70°C are recommended. Ethanol: < 5.95 mg/mL,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 3.3 mg/mL (8.32 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	2.5226 mL	12.6129 mL	25.2258 mL
5 mM	0.5045 mL	2.5226 mL	5.0452 mL
10 mM	0.2523 mL	1.2613 mL	2.5226 mL
50 mM	0.0505 mL	0.2523 mL	0.5045 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

Gao ZG, et al. 2,2'-Pyridylisatogen tosylate antagonizes P2Y1 receptor signaling without affecting nucleotide binding. Biochem Pharmacol. 2004 Jul 15;68(2):231-7.
King BF, et al. Potentiation by 2,2'-pyridylisatogen tosylate of ATP-responses at a recombinant P2Y1 purinoceptor. Br J Pharmacol. 1996 Mar;117(6):1111-8.
Menton K, et al. Role of spin trapping and P2Y receptor antagonism in the neuroprotective effects of 2,2'-pyridylisatogen tosylate and related compounds. Eur J Pharmacol. 2002 May 24;444(1-2):53-60.