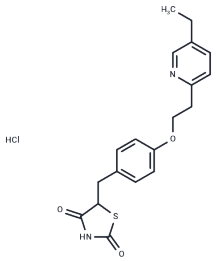
Data Sheet (Cat.No.T0214L)

TargetMol

Pioglitazone hydrochloride

Chemical Properties



CAS No. : 112529-15-4

Formula: C19H20N2O3S·HCl

Molecular Weight: 392.90

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	Pioglitazone hydrochloride (AD 4833) is the hydrochloride salt of an orally-active thiazolidinedione with antidiabetic properties and potential antineoplastic activity.
Targets(IC50)	Ferroptosis,PPAR
In vitro	In male obese rats, oral administration of Pioglitazone (0.3-3 mg/kg) over a period of 7 days resulted in a dose-dependent reduction of hyperglycemia, hyperlipidemia, and hyperinsulinemia.
In vivo	Pioglitazone protects dopaminergic neurons from LPS-induced damage by inhibiting the expression of iNOS and the production of NO. It also suppresses the phosphorylation of p38 protein induced by lipopolysaccharides.
Cell Research	In order to evaluate cell proliferation, HIT-T15 cells are seeded on 96-well plates (3×104 cells/well) and cultured for 5 days as described. Viable cells are determined using the Cell Titer 96 Aqueous One Solution Cell Proliferation Assay. To evaluate cell apoptosis and cell necrosis, HIT-T15 cells are plated on 6-well dishes (7×105 cells/well) for 5 days in standard conditions (CTR) or in the presence of AGEs (AGEs) with or without Pioglitazone (0.5 or 1 μM) or AG (1 mM). They are then processed to measure both the activity of caspase-3 and the activity of lactate dehydrogenase (LDH) (a stable cytosolic enzyme that is a marker of cell membrane damage and cell death due to necrosis) using Cytotox 96 Non Radioactive Cytotoxicity Assay[2].

Solubility Information

Solubility	DMSO: 250 mg/mL (636.29 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: < 10 mg/mL (25.45 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% (20% SBE-β-CD in Saline): < 10 mg/mL (25.45 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% Corn oil: < 10 mg/mL (25.45 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% Saline: < 10 mg/mL (25.45 mM),Lower concentrations may be soluble, but exact solubility limit is unknown.

In vivo Formulation	*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	2.5452 mL	12.7259 mL	25.4518 mL
5 mM	0.509 mL	2.5452 mL	5.0904 mL
10 mM	0.2545 mL	1.2726 mL	2.5452 mL
50 mM	0.0509 mL	0.2545 mL	0.509 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

Xing B, et al. J Neuroinflammation,2008, 5, 4.
Croppi G, Zhou Y, Yang R, et al. Discovery of an Inhibitor for Bacterial 3-Mercaptopyruvate Sulfurtransferase that Synergistically Controls Bacterial Survival. Cell Chemical Biology. 2020
Sugiyama Y, et al. Arzneimittelforschung,1990, 40(3), 263-267.
Schütz B, et al. J Neurosci. 2005 Aug 24;25(34):7805-12.
Ikeda H, et al. Arzneimittelforschung,1990, 40(2 Pt 1), 156-162.
Kondo T, et al. Arzneimittelforschung,1996, 46(6), 594-600.
Croppi G, Zhou Y, Yang R, et al. Discovery of an Inhibitor for Bacterial 3-Mercaptopyruvate Sulfurtransferase that Synergistically Controls Bacterial Survival[J]. Cell Chemical Biology. 2020