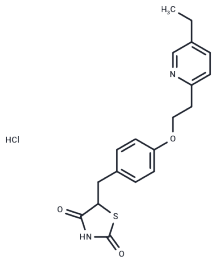
Data Sheet (Cat.No.T0214L)

TargetMol

Pioglitazone hydrochloride

Chemical Properties



CAS No. : 112529-15-4

Formula: C19H20N2O3S·HCl

Molecular Weight: 392.9

Appearance: no data available

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

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: 50 mg/mL (127.26 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

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.

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
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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