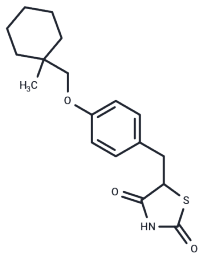
Data Sheet (Cat.No.T19710)

TargetMol

Ciglitazone

Chemical Properties



CAS No. : 74772-77-3

Formula: C18H23NO3S

Molecular Weight: 333.45

Storage: Store at low temperature,Keep away from moisture
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	Ciglitazone (ADD 3878) is a potent and selective PPARγ agonist (EC50: 3 μM) and oral hypoglycemic agent. Ciglitazone inhibits proliferation and differentiation of th17 cells, decreases insulin levels, vascular endothelial growth factor production and blood pressure, and induces cell cycle arrest in gastric cancer cells. Selegiline induces apoptosis in opossum kidney epithelial cells and activates nuclear translocation of p38 MAPK and apoptosis-inducing factor (AIF). Ciglitazone exhibits hypoglycaemic activity in animal models of obesity and hyperglycaemia.
Targets(IC50)	Apoptosis,p38 MAPK,PPAR
In vitro	Ciglitazone (0-20 μM ; 24 hours) ciglitazone causes the generation of ROS and an increase in intracellular Ca2+ and induces apoptosis through a PPAR-independent mechanism.[4]
In vivo	Ciglitazone (100 mg/kg/day ; 2 days ; C57BL/6J-ob/ob mice) elicits a drastic fall in blood glucose.[3] Ciglitazone (100 mg/kg/day ; 41-44 days ; ob/ob mice) degranulation of islet beta-cells and increased pancreatic insulin content are observed.[3]

Solubility Information

Solubility	DMSO: 250 mg/mL (749.74 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (29.99 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (29.99 mM),Solution. 10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (9.9 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	2.999 mL	14.9948 mL	29.9895 mL
5 mM	0.5998 mL	2.999 mL	5.9979 mL
10 mM	0.2999 mL	1.4995 mL	2.999 mL
50 mM	0.060 mL	0.2999 mL	0.5998 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

Willson TM, et al. The structure-activity relationship between peroxisome proliferator-activated receptor gamma agonism and the antihyperglycemic activity of thiazolidinediones. J Med Chem. 1996 ; 39(3):665-668.
Kim DH, et al. Ciglitazone, a peroxisome proliferator-activated receptor gamma ligand, inhibits proliferation and differentiation of th17 cells. Biomol Ther (Seoul). 2015 ; 23(1):71-76.
Chang AY, et al. Ciglitazone, a new hypoglycemic agent. I. Studies in ob/ob and db/db mice, diabetic Chinese hamsters, and normal and streptozotocin-diabetic rats. Diabetes. 1983 ; 32(9):830-838. d
Kwon CH, et al. Ciglitazone induces apoptosis via activation of p38 MAPK and AIF nuclear translocation mediated by reactive oxygen species and Ca(2+) in opossum kidney cells. Toxicology. 2009 ; 257(1-2):1-9.