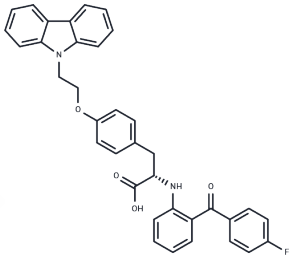
Data Sheet (Cat.No.T14948)

TargetMol

Chiglitazar

Chemical Properties



CAS No. : 743438-45-1

Formula: C36H29FN2O4

Molecular Weight: 572.63

Storage: Keep away from moisture,Keep away from direct sunlight
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	Chiglitazar is a PPAR α/γ/δ agonist and insulin sensitizer used in the treatment of type 2 diabetes mellitus to lower blood glucose, regulate blood lipids, and have anti-inflammatory and anti-fibrotic effects.
Targets(IC50)	PPAR
In vitro	The in vitro activity of chiglitazar was evaluated in U-2OS human osteosarcoma cells using luciferase reporter assays. Cells were co-transfected with expression plasmids for PPARα or PPARγ and corresponding reporter constructs, then treated with chiglitazar for 24 hours. Chiglitazar effectively activated both PPARα and PPARγ (EC_{50} = 1.2μM and 0.08μM, respectively), showing stronger PPARα activation than rosiglitazone and pioglitazone, and moderate PPARγ activity compared to rosiglitazone [1].
In vivo	The in vivo activity of chiglitazar was tested in monosodium glutamate (MSG)-induced obese insulin-resistant rats. Six-month-old MSG rats were divided into groups (n = 10 per group) and treated by oral gavage with chiglitazar (5, 10, or 20mg/kg/day) or rosiglitazone (5mg/kg/day) for 40 days. Glucose tolerance (IPGTT), insulin tolerance (ITT), euglycemic-hyperinsulinemic clamp, and alanine-induced gluconeogenesis tests were performed. Chiglitazar improved glucose tolerance, increased insulin sensitivity (higher GIR), suppressed hepatic gluconeogenesis, reduced liver glycogen content, improved plasma lipid profiles (TG, TCHO, NEFA, LDL-C), and decreased hepatic and muscular lipid accumulation. Chiglitazar also upregulated hepatic expression of PPARα target genes (ACO, CPT1, CYP4A10), suggesting enhanced fatty acid oxidation [1].

Solubility Information

Solubility	DMSO: 80 mg/mL (139.71 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: 3.3 mg/mL (5.76 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7463 mL	8.7316 mL	17.4633 mL
5 mM	0.3493 mL	1.7463 mL	3.4927 mL
10 mM	0.1746 mL	0.8732 mL	1.7463 mL
50 mM	0.0349 mL	0.1746 mL	0.3493 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

Li PP, et al. The PPARalpha/gamma dual agonist chiglitazar improves insulin resistance and dyslipidemia in MSG obese rats. Br J Pharmacol. 2006 Jul;148(5):610-8.

Jia W,et al. Chiglitazar monotherapy with sitagliptin as an active comparator in patients with type 2 diabetes: a randomized, double-blind, phase 3 trial (CMAS). Sci Bull (Beijing). 2021 Aug 15;66(15):1581-1590.