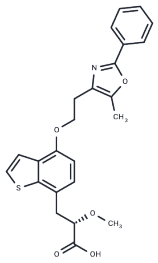
Data Sheet (Cat.No.T14176)

TargetMol

Aleglitazar

Chemical Properties



CAS No. : 475479-34-6

Formula: C24H23NO5S

Molecular Weight: 437.51

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	Aleglitazar (R1439) (R1439) is a potent dual PPARα/γ agonist, with IC50s of 38 nM and 19 nM for human PPARa and PPARγ, respectively. Aleglitazar can be used for the research of type II diabetes.
Targets(IC50)	PPAR
In vitro	Aleglitazar exhibits species selectivity for PPARα, with EC50 values of 50 nM, 2.26 μM, and 2.34 μM for human, rat, and mouse PPARα, respectively[1]. At concentrations of 0.01-40 μM (12-48 hours), aleglitazar does not significantly increase lactate dehydrogenase (LDH) release at 0.1-20 μM but shows significant increases at 30 μM and 40 μM[2]. Additionally, aleglitazar (0.01-20 μM; 48 hours) decreases hyperglycemia (HG, glucose 25 mM)-induced apoptosis, caspase-3 activity, and cytochrome-C release, while improving cell viability in hyperglycemic conditions[2].
In vivo	Aleglitazar (0.3-3.0 mg/kg; i.p.; daily; for 7 days) exerts beneficial effects on structural and functional outcomes of mild brain ischemia, reduces key aspects of microglia activation including NO production, release of proinflammatory cytokines, migration, and phagocytosis, and attenuates inflammatory responses in the post-ischemic brain[3].

Solubility Information

Solubility	DMSO: 45 mg/mL (102.85 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: 2 mg/mL (4.57 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	2.2857 mL	11.4283 mL	22.8566 mL
5 mM	0.4571 mL	2.2857 mL	4.5713 mL
10 mM	0.2286 mL	1.1428 mL	2.2857 mL
50 mM	0.0457 mL	0.2286 mL	0.4571 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

Bénardeau A, Verry P, Atzpodien EA, et al. Effects of the dual PPAR-α/γ agonist aleglitazar on glycaemic control and organ protection in the Zucker diabetic fatty rat. Diabetes Obes Metab. 2013 Feb;15(2):164-74.
Younk LM, Uhl L, Davis SN. Pharmacokinetics, efficacy and safety of aleglitazar for the treatment of type 2 diabetes with high cardiovascular risk. Expert Opin Drug Metab Toxicol. 2011 Jun;7(6):753-63.
Foley-Comer AJ, Young AM, Russell-Yarde F, et al. Aleglitazar, a balanced PPARα/γ agonist, has no clinically relevant pharmacokinetic interaction with high-dose atorvastatin or rosuvastatin. Expert Opin Investig Drugs. 2011 Jan;20(1):3-12.
Cavender MA, Lincoff AM. Therapeutic potential of aleglitazar, a new dual PPAR-α/γ agonist: implications for cardiovascular disease in patients with diabetes mellitus. Am J Cardiovasc Drugs. 2010;10(4):209-16.
Bénardeau A, Benz J, Binggeli A, et al. Aleglitazar, a new, potent, and balanced dual PPARalpha/gamma agonist for the treatment of type II diabetes. Bioorg Med Chem Lett. 2009 May 1;19(9):2468-73.