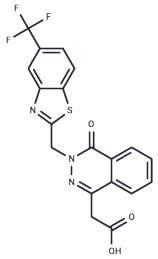
Data Sheet (Cat.No.T35317)

TargetMol

Zopolrestat

Chemical Properties



CAS No. : 110703-94-1

Formula: C19H12F3N3O3S

Molecular Weight: 419.38

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	Zopolrestat (CP 73850) is a potent inhibitor of aldose reductase (IC50 = 3.1 nM).
Targets(IC50)	Reductase
In vitro	Zopolrestat is a potent inhibitor of the enzymatic reduction of glyceraldehyde and glucose[1].
In vivo	After the administration of Zopolrestat (2.5 mg/kg-50 mg/kg; p.o), the ED50s in reversing already elevated sorbitol accumulation in rat sciatic nerve, retina, and lens in a chronic test were 1.9, 17.6, and 18.4 mg/kg, respectively[1].

Solubility Information

Solubility	DMSO: 11 mg/mL (26.23 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: 0.5 mg/mL (1.19 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	2.3845 mL	11.9224 mL	23.8447 mL
5 mM	0.4769 mL	2.3845 mL	4.7689 mL
10 mM	0.2384 mL	1.1922 mL	2.3845 mL
50 mM	0.0477 mL	0.2384 mL	0.4769 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

Mylari BL, et al. Novel, potent aldose reductase inhibitors: 3,4-dihydro-4-oxo-3-[[5-(trifluoromethyl)-2-benzothiazolyl] methyl]-1-phthalazineacetic acid (zopolrestat) and congeners. J Med Chem. 1991;34(1):108-122.
Zhai J, et al. Zopolrestat as a human glyoxalase I inhibitor and its structural basis. ChemMedChem. 2013 Sep;8(9):1462-4.
Badawy D, et al. Aldose reductase inhibitors zopolrestat and ferulic acid alleviate hypertension associated with diabetes: effect on vascular reactivity. Can J Physiol Pharmacol. 2013 Feb;91(2):101-7.
Ramasamy R, et al. Attenuation of ischemia induced increases in sodium and calcium by the aldose reductase inhibitor zopolrestat. Cardiovasc Res. 1999 Apr;42(1):130-9.