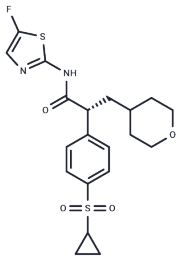
Data Sheet (Cat.No.T10092)

TargetMol

PSN-GK1

Chemical Properties



CAS No. : 745051-61-0

Formula: C20H23FN2O4S2

Molecular Weight: 438.54

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	PSN-GK1 is a potent activator of glucokinase (EC50: 0.13 μM).
Targets(IC50)	Others,Glucokinase
In vivo	PSN-GK1 demonstrates an excellent pharmacokinetic profile with high oral bioavailability in rats and significantly reduces blood glucose levels, showing potent antihyperglycemic effects in diabetic rodents without causing hypoglycemia [1]. At 5 mM glucose, PSN-GK1 activates glucokinase (4.3-fold, EC50: 130 nM), increases MIN6 insulin secretion (26-fold, EC50: 267 nM), and enhances 2-DG hepatocytic uptake (3-fold, EC50: 1 μM). In C57Bl/6 mice, PSN-GK1 reduces blood glucose at 1 and 10 mg/kg orally, with significant insulin increase only at the higher dose. In hyperinsulinemic 10-mM glucose clamps, PSN-GK1 increases 2-DG incorporation into liver glycogen sixfold [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2803 mL	11.4015 mL	22.8029 mL
5 mM	0.4561 mL	2.2803 mL	4.5606 mL
10 mM	0.228 mL	1.1401 mL	2.2803 mL
50 mM	0.0456 mL	0.228 mL	0.4561 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

Bertram LS, et al. SAR, pharmacokinetics, safety, and efficacy of glucokinase activating 2-(4-sulfonylphenyl)-N-thiazol-2-ylacetamides: discovery of PSN-GK1. J Med Chem. 2008 Jul 24;51(14):4340-5.
Fyfe MC, et al. Glucokinase activator PSN-GK1 displays enhanced antihyperglycaemic and insulinotropic actions. Diabetologia. 2007 Jun;50(6):1277-87.

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