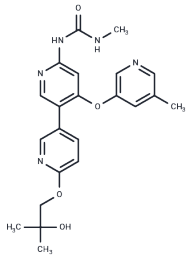
Data Sheet (Cat.No.T3312)

TargetMol

AM-2394

Chemical Properties



CAS No. : 1442684-77-6

Formula: C22H25N5O4

Molecular Weight: 423.46

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	AM-2394 is an effective and specific Glucokinase agonist (GKA, EC50: 60 nM), which catalyzes the phosphorylation of glucose to glucose-6-phosphate. AM-2394(AM2394) increases the affinity of GK for glucose by approximately 10-fold, exhibits moderate clearance and good oral bioavailability in multiple animal models, and lowers glucose excursion following an oral glucose tolerance test in an ob/ob mouse model of diabetes.
Targets(IC50)	Glucokinase
In vivo	AM-2394, a novel glucokinase activator, prominently reduces plasma glucose levels in ob/ob mice during an oral glucose tolerance test (OGTT) at a 3 mg/kg dosage. It enhances glucokinase's (GK) glucose affinity by roughly 10-fold, showing moderate clearance and favorable oral bioavailability across various animal models. Additionally, AM-2394 significantly improves glucose control following an OGTT in an ob/ob mouse model of diabetes. It demonstrates suitable cross-species plasma clearance, distribution volume, and oral bioavailability, supporting its potential for further investigation in animal studies[1].
Kinase Assay	Kinase screen: Briefly, all assays (25.5 µl at 21°C for 30 min) are performed using a Biomek 2000 Laboratory Automation Workstation in a 96-well format. Reactions contains 5–20 mU purified kinase along with substrate peptide or protein and are initiated by the addition of 10 mM MgAcetate and 5, 20, or 50 µM ATP ([γ-33P]-ATP, 800 cpm/pmol).

Solubility Information

Solubility	DMSO: 50 mg/mL (118.07 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 (4.72 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	2.3615 mL	11.8075 mL	23.615 mL
5 mM	0.4723 mL	2.3615 mL	4.723 mL
10 mM	0.2361 mL	1.1807 mL	2.3615 mL
50 mM	0.0472 mL	0.2361 mL	0.4723 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

Dransfield PJ, et al. Novel Series of Potent Glucokinase Activators Leading to the Discovery of AM-2394. ACS Med Chem Lett. 2016 May 23;7(7):714-8.