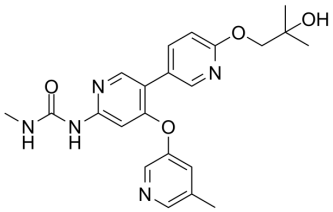
AM-2394

Cat. No.:	HY-100221
CAS No.:	1442684-77-6
Molecular Formula:	$C_{22}H_{25}N_5O_4$
Molecular Weight:	423.47
Target:	Glucokinase
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 30 mg/mL (70.84 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3614 mL	11.8072 mL	23.6144 mL
	5 mM	0.4723 mL	2.3614 mL	4.7229 mL
	10 mM	0.2361 mL	1.1807 mL	2.3614 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.90 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.90 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.90 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	AM-2394 is a structurally distinct glucokinase activator (GKA). AM-2394 activates glucokinase (GK) with an EC_{50} of 60 nM.
IC_{50} & Target	EC50: 60 nM (glucokinase)[1]
In Vivo	AM-2394, a structurally distinct glucokinase activator that displays a robust reduction in plasma glucose during an oral glucose tolerance test (OGTT) in ob/ob mice at a dose of 3 mg/kg. AM-2394 increases the affinity of glucokinase (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. AM-2394 exhibits good-to-moderate cross species plasma clearance, volume of distribution, and oral bioavailability, allowing for further evaluation in animal models[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]

Mice[1]

In order to determine the effect of AM-2394 in an animal model of type 2 diabetes, it was administered per os (PO) to male ob/ob mice 30 minutes prior to performing an oral glucose tolerance test (OGTT). Doses of 1, 3, 10, 30 mg/kg each reduced glucose excursion, with maximal efficacy seen at 3 mg/kg.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. 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.

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