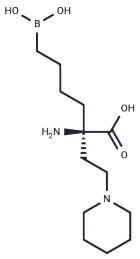
Data Sheet (Cat.No.T10367)

TargetMol

Arginase inhibitor 1

Chemical Properties



CAS No. : 1345808-25-4

Formula: C13H27BN2O4

Molecular Weight: 286.18

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Arginase inhibitor 1 is a potent inhibitor of human arginases I and II [IC50s: 223 and 509 nM].
Targets(IC50)	Others
In vitro	Arginase inhibitor 1 is an arginase inhibitor with significant activity in a rat model of myocardial ischemia/reperfusion injury (MI/RI). Arginase inhibitor 1 is potent against hARG I in both in vitro enzyme and cellular assays. The IC50 for Arginase inhibitor 1 is 8 μM in CHO Cells Over-Expressing hArgI
In vivo	Pharmacokinetic evaluation of Arginase inhibitor 1 is conducted after intravenous (i.v.) and oral (p.o.) dosing in male Sprague-Dawley rats (n=3 per dose route). Arginase inhibitor 1 is formulated in 0.9% saline and administered intravenously at 10 mg/kg by bolus through a pre-implanted cannula at a dosing volume of 1 mL/kg, and orally at 10 mg/kg via gavage at a dosing volume of 2 mL/kg. Following i.v. dosing with 10 mg/kg in fasted animals, Arginase inhibitor 1has a terminal elimination half-life (t1/2) of 3.3 h with a volume of distribution and total body clearance of 1.86 L/kg and 7.89 mL/min/kg, respectively. The oral bioavailability of Arginase inhibitor 1 (10 mg/kg, p.o.) is 28% with a Cmax of 0.45 mg/L.

Solubility Information

Solubility	H2O: 30 mg/mL (104.83 mM),Sonication is recommended. DMSO: 48 mg/mL (167.73 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4943 mL	17.4715 mL	34.943 mL
5 mM	0.6989 mL	3.4943 mL	6.9886 mL
10 mM	0.3494 mL	1.7472 mL	3.4943 mL
50 mM	0.0699 mL	0.3494 mL	0.6989 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.

Reference

Van Zandt MC, et al. Discovery of (R)-2-amino-6-borono-2-(2-(piperidin-1-yl)ethyl)hexanoic acid and congeners as highly potentinhibitors of human arginases I and II for treatment of myocardial reperfusion injury. J Med Chem. 2013 Mar 28;56(6):2568-80.