ZK824859 hydrochloride

Cat. No.: HY-114330A

CAS No.: 2436760-76-6

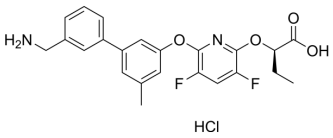
Molecular Formula: $C_{23}H_{23}ClF_2N_2O_4$

Molecular Weight: 464.89

Target: PAI-1; Ser/Thr Protease

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 125 mg/mL (268.88 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Mass / Solvent / Concentration	1 mg	5 mg	10 mg
1 mM	2.1510 mL	10.7552 mL	21.5105 mL
5 mM	0.4302 mL	2.1510 mL	4.3021 mL
10 mM	0.2151 mL	1.0755 mL	2.1510 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: ≥ 2.08 mg/mL (4.47 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.47 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.47 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ZK824859 hydrochloride is an oral available and selective urokinase plasminogen activator (uPA) inhibitor with IC_{50}s of 79 nM, 1580 nM and 1330 nM for human uPA, tPA, and plasmin, respectively[1].

IC_{50} & Target

IC50: 79 nM (human uPA), 1580 nM (human tPA), 1330 nM (human plasmin)[1].

In Vitro

ZK824859 is 5 fold less potent and has lost selectivity in mouse: uPA IC_{50}=410 nM; tPA IC_{50}=910 nM; plasmin IC_{50}=1600 nM compared to human IC_{50} values of 79 nM, 1580 nM and 1330 nM respectively[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo	ZK824859 (50, 25 and 10 mg/kg; b.i.d.; 25 days) is used in a chronic mouse EAE model. ZK 824859 completely prevents the development of disease. However, two lower doses (25 and 10 mg/kg) have no effect on clinical scores[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female SJL mice with chronic mouse EAE model[1]
Dosage:	50, 25 and 10 mg/kg
Administration:	B.i.d.; 25 days
Result:	Prevented the development of disease at 50 mg/kg completely. However, 25 and 10 mg/kg had no effect on clinical scores.

REFERENCES

[1]. Islam I, et al. Discovery of selective urokinase plasminogen activator (uPA) inhibitors as a potential treatment for multiple sclerosis. Bioorg Med Chem Lett. 2018 Nov 1;28(20):3372-3375.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA