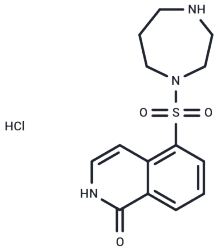
Data Sheet (Cat.No.T4276)

TargetMol

Hydroxyfasudil Hydrochloride

Chemical Properties



CAS No. : 155558-32-0

Formula: C14H18ClN3O3S

Molecular Weight: 343.83

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	Hydroxyfasudil Hydrochloride (HA 1100 hydrochloride) is a ROCK1/2 inhibitor (IC50s: 0.73/0.72 μM).
Targets(IC50)	ROCK
In vitro	Hydroxyfasudil has a weak inhibition of PKA (IC50: 37 μM), 50-fold higher than those of the ROCKs. Hydroxyfasudil increases eNOS mRNA levels (EC50: 0.8 ± 0.3 μM). Hydroxyfasudil (0-100 μM) concentration-dependently increases eNOS activity and stimulates NO production in HAEC. Hydroxyfasudil (10 μM) increases the half-life of eNOS mRNA from 13 to 16 hours but does not affect eNOS promoter activity (0.1-100 μM).
In vivo	Hydroxyfasudil (10 mg/kg, i.p.) markedly increases both the maximal and average voided volumes and reduces maximal detrusor pressure in SD rats. In spontaneously hypertensive rats (SHRs), Hydroxyfasudil (3 mg/kg, i.p.) inhibits norepinephrine-induced hypercontractility and significantly ameliorates decreased penile cGMP contents at doses of 3/10 mg/kg, i.p.
Animal Research	Hydroxyfasudil is formulated in saline.Micturition behavior is studied after administration of either Hydroxyfasudil (10 mg/kg, i.p.) or a corresponding volume of saline. Each rat is placed in a metabolic cage containing a urine collection funnel that is placed over an electronic balance. The balance is connected to a personal computer via a multiport controller and used to measure the cumulative weight of the collected urine. Every 150 s during a continuous 24-h period, the computer samples and records the data for the micturition frequency and volumes. The micturition reflex parameters that are collected include: urine volume per micturition, maximal micturition volume, micturition frequency, and total urine output in the Hydroxyfasudil- or vehicle-treated animals. Each monitoring session started at 18.00 hours. Prior to being placed in the metabolic cage at the start of each experimental period, the animals received either a single injection of Hydroxyfasudil (10 mg/kg) dissolved in saline or an injection of saline without the inhibitor.

Solubility Information

Solubility	DMSO: 62 mg/mL (180.32 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9084 mL	14.5421 mL	29.0841 mL
5 mM	0.5817 mL	2.9084 mL	5.8168 mL
10 mM	0.2908 mL	1.4542 mL	2.9084 mL
50 mM	0.0582 mL	0.2908 mL	0.5817 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

Rikitake Y, et al. Inhibition of Rho kinase (ROCK) leads to increased cerebral blood flow and stroke protection. Stroke. 2005 Oct;36(10):2251-7. Epub 2005 Sep 1.

Sun L, Sun L, Li X, et al. A Novel Tigecycline Adjuvant ML-7 Reverses the Susceptibility of Tigecycline-Resistant Klebsiella pneumoniae. Frontiers in cellular and infection microbiology. 2022: 1341.

Masago T, et al. Effect of the rho-kinase inhibitor hydroxyfasudil on bladder overactivity: an experimental rat model. Int J Urol. 2009 Oct;16(10):842-7.

Saito M, et al. Hydroxyfasudil ameliorates penile dysfunction in the male spontaneously hypertensive rat. Pharmacol Res. 2012 Oct;66(4):325-31.

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