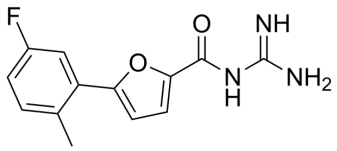
KR-32568

Cat. No.:	HY-118778
CAS No.:	852146-73-7
Molecular Formula:	$C_{13}H_{12}FN_3O_2$
Molecular Weight:	261.25
Target:	Na+/H+ Exchanger (NHE)
Pathway:	Membrane Transporter/Ion Channel
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (382.78 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.8278 mL	19.1388 mL	38.2775 mL
5 mM	0.7656 mL	3.8278 mL	7.6555 mL
10 mM	0.3828 mL	1.9139 mL	3.8278 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 (9.57 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.57 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

KR-32568 is a sodium/hydrogen exchanger-1 (NHE-1) inhibitor with an IC_{50} of 230 nM. KR-32568 has cardioprotective effects [1][2].

IC_{50} & Target

IC50: 230 nM (NHE-1)[2]

In Vitro

KR-32568 (10 nM-1 μM) inhibits NHE-1-mediated platelet swelling induced by intracellular acidifi cation of rabbit platelet-rich plasma in a concentration-dependent manner, with the IC_{50} value of 24 nM[1].

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

In Vivo

KR-32568 (0.1-1.0 mg/kg; i.v.; once) exert potent cardioprotective effects in rats, such as reduces infarct size, and

significantly reduces the total number of ventricular premature beats[1].

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

Animal Model:	Male Sprague-Dawley rats (350-380 g) bearing 30 min ischemia/2.5 h reperfusion heart injury[1]
Dosage:	0.1 mg/kg and 1.0 mg/kg
Administration:	i.v.; once
Result:	Exerted potent cardioprotective effects in rats.

REFERENCES

[1]. Hui-Yul Roh, et al. Cardioprotective effects of [5-(2-methyl-5-fluorophenyl)furan-2-ylcarbonyl]guanidine (KR-32568) in an anesthetized rat model of ischemia and reperfusion heart injury. Pharmacology. 2005 Dec;75(1):37-44.

[2]. Sunkyung Lee, et al. (5-Arylfuran-2-ylcarbonyl)guanidines as cardioprotectives through the inhibition of Na+/H+ exchanger isoform-1. J Med Chem. 2005 Apr 21;48(8):2882-91.

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