FR 167653

Cat. No.: HY-18754A

CAS No.: 158876-66-5

Molecular Formula: $C_{24}H_{20}FN_5O_6S$

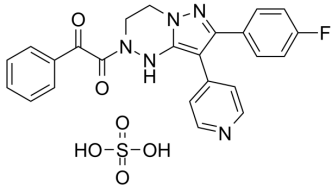
Molecular Weight: 525.51

Target: p38 MAPK; Autophagy

Pathway: MAPK/ERK Pathway; Autophagy

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 (190.29 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.9029 mL	9.5146 mL	19.0291 mL
5 mM	0.3806 mL	1.9029 mL	3.8058 mL
10 mM	0.1903 mL	0.9515 mL	1.9029 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 (4.76 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.76 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.76 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

FR 167653 (FR 167653 sulfate), an orally active and selective p38 MAPK inhibitor, is a potent suppressor of TNF-α and IL-1β production via specific inhibition of p38 MAPK activity. FR 167653 (FR 167653 sulfate) is effective in treating inflammation, relieving trauma and ischemia-reperfusion injury in vivo[1][2][3].

IC_{50} & Target

p38 MAPK[1]

In Vivo

FR 167653 (FR 167653 sulfate) (32 mg/kg; i.h.; 24-48 hours) significantly decreases the extent of acute tubular necrosis[1].

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

Animal Model:	Inbred male Balbuc mice (aged 8 weeks)[1]
Dosage:	32 kg/mg
Administration:	Subcutaneous injection; 24-48 hours
Result:	The scores of acute tubular necrosis in FR-167653-treated mice were significantly lower in vehicle-treated mice at 24 and 48 h after ischaemiaureperfusion both in cortex and outer medulla.

REFERENCES

[1]. Furuichi K, et al. Administration of FR167653, a new anti-inflammatory compound, prevents renal ischaemia/reperfusion injury in mice. Nephrol Dial Transplant. 2002 Mar;17(3):399-407.

[2]. Iwata Y, et al. p38 Mitogen-activated protein kinase contributes to autoimmune renal injury in MRL-Fas lpr mice. J Am Soc Nephrol. 2003 Jan;14(1):57-67.

[3]. Kawashima Y, et al. FR167653 attenuates ischemia and reperfusion injury of the rat lung with suppressing p38mitogen-activated protein kinase. J Heart Lung Transplant. 2001 May;20(5):568-74.

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