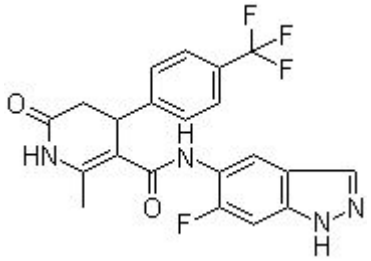
Product Introduction

GSK429286A

GSK429286A is a selective inhibitor of **ROCK1** and **ROCK2** with **IC50** of 14 nM and 63 nM, respectively.

Technical Data:

Molecular Weight (MW):	432.37	
Formula:	C21H16F4N4O2	
Solubility (25°C) * <1 mg/ml means slightly soluble or insoluble:	DMSO 87 mg/mL	
	Water <1 mg/mL	
	Ethanol 4 mg/mL	
Purity:	>98%	
Storage:	3 years -20℃Powder	
	6 months-80℃in DMSO	
CAS No.:	864082-47-3	

Biological Activity

GSK429286A slightly inhibits RSK and p70S6K with IC50 of 0.78 μM and 1.94 μM, respectively. GSK429286A significantly inhibits rat aortic ring dilation with IC50 of 190 nM. [1] GSK429286A at 1 μM reduces ROCK2 activity over 20-fold, under conditions in which the only other kinase tested that is significantly inhibited is MSK1 whose activity is reduced ~5-fold. GSK429286A is a more selective ROCK2 inhibitor than the widely utilized ROCK inhibitor Y-27632 as assessed on kinase-specificity panel, and does not significantly inhibit LRRK2 even at doses as high as 30 μM (500-fold higher than IC50 of inhibition of ROCK2). Like GSK269962A but not sunitinib, GSK429286A treatment at 10 μM ablates basal or G14V-Rho mutant induced phosphorylation of MYPT at Thr850 in HEK-293 cells to a similar extent as H-1152 and

Y-27632, consistent with ROCK mediating this phosphorylation, whereas GSK429286A does not inhibit ERM protein phosphorylation either in the presence or absence of G14V-Rho. [2]

GSK429286A has 61% oral bioavailability in male Sprague-Dawley rats. Oral administration of GSK429286A at single doses of 3-30 mg/kg dramatically reduces mean arterial pressure in the spontaneously hypertensive rats (SHRs) in a dose-dependent manner, with a maximum decrease of 50 mmHg after approximately 2 hours treatment at dose of 30 mg/kg. [1]

Greater selectivity than Y-27632.

References

[1] Goodman KB, et al. J Med Chem, 2007, 50(1), 6-9.

[2] Nichols RJ, et al. Biochem J, 2009, 424(1), 47-60.

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