SC 51089 free base

Cat. No.: HY-108563A

CAS No.: 146033-03-6

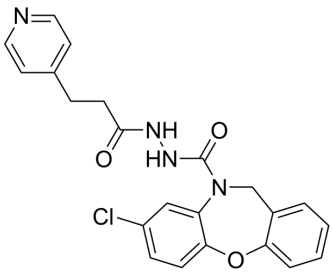
Molecular Formula: $C_{22}H_{19}ClN_4O_3$

Molecular Weight: 422.86

Target: Prostaglandin Receptor

Pathway: GPCR/G Protein

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (236.48 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3648 mL	11.8242 mL	23.6485 mL
	5 mM	0.4730 mL	2.3648 mL	4.7297 mL
	10 mM	0.2365 mL	1.1824 mL	2.3648 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

SC 51089 free base is a selective antagonist of prostaglandin E_2 EP1 receptor, with K_is of 1.3, 11.2, 17.5, and 61.1 μM for EP1, TP, EP3, and FP receptors, respectively. SC 51089 free base exhibits neuroprotective activity[1][2][3].

IC_{50} & Target

EP1	TP	EP3	FP
1.3 μM (Ki)	11.2 μM (Ki)	17.5 μM (Ki)	61.1 μM (Ki)

In Vitro

SC 51089 free base (5 μM; 24 h) attenuates prostaglandin E2 (PGE2)-induced the death of neuronal cells exposed to t-BuOOH [2].

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

In Vivo

SC 51089 free base (40 μg/kg; infused i.p. for 28 d) ameliorates motor coordination and balance dysfunction and rescues long-term memory deficit in R6/1 mouse model of HD[3].

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

Animal Model:	R6/1 mouse model of Huntington's disease (HD), from 13 to 18 weeks of age[3]

Dosage:	40 μg/kg/day
Administration:	Infused i.p. at a rate of 0.11 μL/h during 28 days by osmotic mini-pump system
Result:	Ameliorated motor coordination and balance dysfunction. Rescued long-term memory deficit. Improved the expression of specific synaptic markers. Reduced the number of huntingtin nuclear inclusions in the striatum and hippocampus.

REFERENCES

[1]. Abramovitz M, et, al. The utilization of recombinant prostanoid receptors to determine the affinities and selectivities of prostaglandins and related analogs. Biochim Biophys Acta. 2000 Jan 17;1483(2):285-93.

[2]. Saleem S, et, al. Effects of EP1 receptor on cerebral blood flow in the middle cerebral artery occlusion model of stroke in mice. J Neurosci Res. 2007 Aug 15;85(11):2433-40.

[3]. Anglada-Huguet M, et, al. Prostaglandin E2 EP1 receptor antagonist improves motor deficits and rescues memory decline in R6/1 mouse model of Huntington's disease. Mol Neurobiol. 2014 Apr;49(2):784-95.

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