CMPD1

Cat. No.: HY-108643

CAS No.: 41179-33-3

Molecular Formula: $C_{22}H_{20}FNO_2$

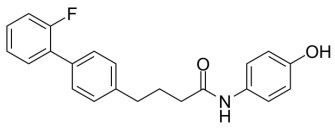
Molecular Weight: 349.4

Target: MAPKAPK2 (MK2)

Pathway: MAPK/ERK Pathway

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 (286.20 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8620 mL	14.3102 mL	28.6205 mL
	5 mM	0.5724 mL	2.8620 mL	5.7241 mL
	10 mM	0.2862 mL	1.4310 mL	2.8620 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: ≥ 2.08 mg/mL (5.95 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.95 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.95 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

CMPD1 is a selective and non-ATP-competitive p38 MAPK-mediated MK2 phosphorylation inhibitor with apparent K_i (K_i^{app}) of 330 nM[1][2].

IC_{50} & Target

Ki^{app}: 330 nM (MK2 phosphorylation)[2]

In Vitro

CMPD1 does not inhibit p38 MAPK-mediated phosphorylation of other two substrates, MBP and ATF2[1].
CMPD1 induced mitotic arrest and apoptosis in U87 cells[1].

CMPD1 inhibits tubulin polymerisation in glioblastoma cells[3].

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

REFERENCES

[1]. Gurgis F, et al. Cytotoxic activity of the MK2 inhibitor CMPD1 in glioblastoma cells is independent of MK2. Cell Death Discov. 2015 Sep 7;1:15028.

[2]. Davidson W, er al. Discovery and characterization of a substrate selective p38alpha inhibitor. Biochemistry. 2004 Sep 21;43(37):11658-71.

[3]. Phoa AF, et al. Pharmacology of novel small-molecule tubulin inhibitors in glioblastoma cells with enhanced EGFR signalling. Biochem Pharmacol. 2015 Dec 15;98(4):587-601.

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