Tau-aggregation and neuroinflammation-IN-1

Cat. No.: HY-146005

CAS No.: 2175953-98-5

Molecular Formula: $C_{25}H_{20}N_2O_7$

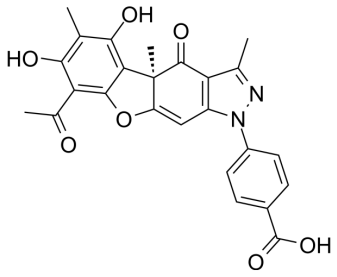
Molecular Weight: 460.44

Target: Microtubule/Tubulin

Pathway: Cell Cycle/DNA Damage; Cytoskeleton

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 : 125 mg/mL (271.48 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1718 mL	10.8592 mL	21.7184 mL
	5 mM	0.4344 mL	2.1718 mL	4.3437 mL
	10 mM	0.2172 mL	1.0859 mL	2.1718 mL

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

BIOLOGICAL ACTIVITY

Description

Tau-aggregation and neuroinflammation-IN-1 is a potent tau-aggregation and neuroinflammation inhibitor. Tau-aggregation and neuroinflammation-IN-1 exhibits remarkable inhibitory activities against AcPHF6 and full-length tau aggregation. Tau-aggregation and neuroinflammation-IN-1 has a low cytotoxicity and reduced NO release in LPS-stimulated BV2 cells. Tau-aggregation and neuroinflammation-IN-1 can reverse okadaic acid-induced memory impairment in rats[1].

IC_{50} & Target

AcPHF6, tau-aggregation, NO[1]

In Vitro

Tau-aggregation and neuroinflammation-IN-1 (compound 30) (0-40 μM) reduces the survival of SH-SY5Y cells at 30 μM, and exerts no significant hepatotoxicity in LO2 cells at high concentrations, also exerts no effect on BV2 cell viability at 20 μM[1]. Tau-aggregation and neuroinflammation-IN-1 (2.5, 5 and 10 μM; 24 hours) retains the anti-inflammatory activity of sodium usnate and inhibits NO release rate by 41% in LPS-stimulated BV2 cells at 10 μM[1].

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

Cell Cytotoxicity Assay

Cell Line:	SH-SY5Y, LO2 and BV-2 cells[1]
Concentration:	0, 10, 20, 30 and 40 μM
Incubation Time:	24 hours
Result:	Reduced the survival of SH-SY5Y cells at 30 μM, and exerted no significant hepatotoxicity in LO2 cells even at high concentrations (up to 40 μM), also exerted no effect on BV2 cell viability at 20 μM.

In Vivo

Tau-aggregation and neuroinflammation-IN-1 (5 and 10 mg/kg; for 14 days) leads to a substantial improvement of the conventional reference spatial memory and cognitive abilities of OA-induced rats[1].

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

Animal Model:	Male SD rats (250-270 g; OA was microinjected into the right dorsal hippocampus)[1]
Dosage:	5 and 10 mg/kg
Administration:	IP; for 7 days, and after OA-injection continued IP for 7 days
Result:	Led to a substantial improvement of the conventional reference spatial memory and cognitive abilities of rats.

REFERENCES

[1]. Shi CJ, Peng W, Zhao JH, et al. Usnic acid derivatives as tau-aggregation and neuroinflammation inhibitors. Eur J Med Chem. 2020;187:111961.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA