Aβ/tau aggregation-IN-1

Cat. No.: HY-141661

CAS No.: 2252162-81-3

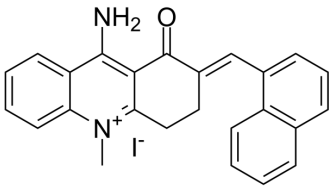
Molecular Formula: $C_{25}H_{21}IN_2O$

Molecular Weight: 492.35

Target: Amyloid-β

Pathway: Neuronal Signaling

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 : 33.33 mg/mL (67.70 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0311 mL	10.1554 mL	20.3108 mL
	5 mM	0.4062 mL	2.0311 mL	4.0622 mL
	10 mM	0.2031 mL	1.0155 mL	2.0311 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: ≥ 1 mg/mL (2.03 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1 mg/mL (2.03 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Aβ/tau aggregation-IN-1 is a potent $Aβ_{1-42}$ β-sheets formation and tau aggregation inhibitor. The K_D values of Aβ/tau aggregation-IN-1 with $Aβ_{1-42}$ and tau are 160 μM and 337 μM, respectively. Aβ/tau aggregation-IN-1 can permeate the blood-brain barrier[1].

IC_{50} & Target

Kd: 160 μM (Aβ1-42)[1].
Kd: 337 μM (tau)[1]

In Vitro

Aβ/tau aggregation-IN-1 (1 μM; 24 hours; HEK-293 T cells) significantly declines the tau aggregation foci[1].
Aβ/tau aggregation-IN-1 with N-methylation of the quinolone ring effectively inhibits $Aβ_{1-42}$ aggregation by 84.7%–99.5% and tau aggregation by 71.2%–101.8%. Aβ/tau aggregation-IN-1 inhibits self-induced $Aβ_{1-42}$ aggregation by inhibiting the formation of β-sheets. Aβ/tau aggregation-IN-1 shows certain binding abilities with $Aβ_{1-42}$ and tau. The K_D value of Aβ/tau

aggregation-IN-1 with $A\beta_{1-42}$ is 160 μM. The K_D value of Aβ/tau aggregation-IN-1 with tau is 337 μM. Aβ/tau aggregation-IN-1 interacts with $A\beta_{1-42}$ and tau through noncovalent interactions[1].

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

Immunofluorescence[1]

Cell Line:	HEK-293 T cells
Concentration:	1 μM
Incubation Time:	24 hours
Result:	Significantly declined the tau aggregation foci.

REFERENCES

[1]. Lv P, et al. Synthesis and evaluation of 1,2,3,4-tetrahydro-1-acridone analogues as potential dual inhibitors for amyloid-beta and tau aggregation. Bioorg Med Chem. 2018;26(16):4693-4705.

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