JNK3 inhibitor-7

Cat. No.: HY-149279

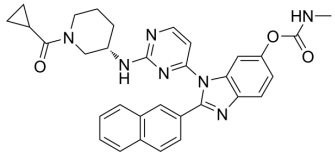
Molecular Formula: $C_{32}H_{31}N_7O_3$

Molecular Weight: 561.63

Target: JNK

Pathway: MAPK/ERK Pathway

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

JNK3 inhibitor-7 is a potent, orally active and cross the blood-brain barrier JNK3 inhibitor with IC_{50} values of 53, 973, 1039 nM for JNK3, JNK2, JNK1, respectively. JNK3 inhibitor-7 shows significant neuroprotective effects. JNK3 inhibitor-7 has the potential for the research of Alzheimer's disease (AD)[1].

IC_{50} & Target

JNK3	JNK2	JNK1
53 nM (IC_{50})	973 nM (IC_{50})	1039 nM (IC_{50})

In Vitro

JNK3 inhibitor-7 (compound 2h; 20 μM; 24, 48 h) increases primary rat cortex neuron cell viability when treatment with 10 μM amyloid-β_{1-42}[1].

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

Cell Viability Assay[1]

Cell Line:	primary rat cortex neuron cells
Concentration:	20 μM
Incubation Time:	24, 48 h
Result:	Increased cell viability when treatment with 10 μM amyloid-β_{1-42}.

In Vivo

JNK3 inhibitor-7 (30, 60 mg/kg; p.o.; daily for 4 weeks) shows significant neuroprotective effects in mice[1].

Pharmacokinetic Parameters of JNK3 inhibitor-7 in Sprague-Dawley rats[1].

compound	2h
admin.	PO
dose (mg/kg)	3
AUC_{last} (h ng/ml)	350.68

C_0 or C_{max} (ng/mL)	342.30
T_{max} (h)	0.39
$T_{1/2}$ (h)	0.65

Sprague-Dawley rats, 3 mg/kg p.o.[1]

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

Animal Model:	7 month-old APP/PS1 AD mice[1]
Dosage:	30, 60 mg/kg
Administration:	P.o.; daily for 4 weeks
Result:	Decreased the escape time and distance traveled, a dose-dependent increased in the quadrant where the escape zone was located and the time spent.

REFERENCES

[1]. Jun J, et al. Carbamate JNK3 Inhibitors Show Promise as Effective Treatments for Alzheimer's Disease: In Vivo Studies on Mouse Models. J Med Chem. 2023 Apr 24.

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