JNK3 inhibitor-5

Cat. No.: HY-151962

CAS No.: 2911640-63-4

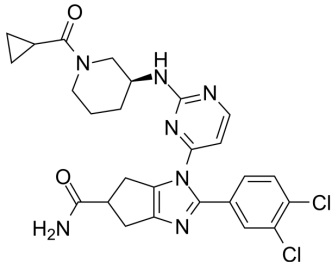
Molecular Formula: $C_{26}H_{27}Cl_2N_7O_2$

Molecular Weight: 540.44

Target: JNK; Apoptosis; GSK-3; p38 MAPK

Pathway: MAPK/ERK Pathway; Apoptosis; PI3K/Akt/mTOR; Stem Cell/Wnt

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



BIOLOGICAL ACTIVITY

Description

JNK3 inhibitor-5 (Compound 22b) is a potent and selective JNK3 inhibitor with an IC_{50} of 0.379 nM. JNK3 inhibitor-5 effectively protects the neuronal cells against amyloid beta-induced apoptosis. JNK3 inhibitor-5 has a high cell permeability and is predicted as BBB permeable[1].

IC_{50} & Target

JNK3	JNK2	JNK1	p38α
0.379 nM (IC_{50})	29.4 nM (IC_{50})	82.7 nM (IC_{50})	215.8 nM (IC_{50})

GSK-3β
3889.7 nM (IC_{50})

In Vitro

JNK3 inhibitor-5 (Compound 22b) (10 μM; 24 h) shows neuroprotective effects against amyloid beta-induced apoptosis[1].

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

Cell Viability Assay[1]

Cell Line:	Primary rat cortical neurons
Concentration:	10 μM
Incubation Time:	Pre-treated for 90 min, followed by treatment with 10 μM $Aβ_{42}$ (HIFP-treated) for 24 h on day 5 of differentiation
Result:	Showed excellent neuroprotective effect.

Western Blot Analysis[1]

Cell Line:	Primary rat cortical neurons
Concentration:	10 μM
Incubation Time:	90 min
Result:	Highly mitigated Aβ1-42-induced c-Jun phosphorylation.

REFERENCES

[1]. Jun J, et al. Novel 1,4,5,6-tetrahydrocyclopenta[d]imidazole-5-carboxamide-based JNK3 inhibitors: Design, synthesis, molecular docking, and therapeutic potential in neurodegenerative diseases. Eur J Med Chem. 2023 Jan 5;245(Pt 1):114917.

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