MOMIPP

Cat. No.: HY-119624

CAS No.: 1363421-46-8

Molecular Formula: $C_{18}H_{16}N_2O_2$

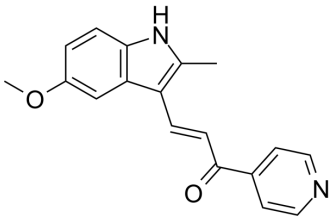
Molecular Weight: 292.33

Target: PIKfyve

Pathway: PI3K/Akt/mTOR

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 31.25 mg/mL (106.90 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.4208 mL	17.1040 mL	34.2079 mL
	5 mM	0.6842 mL	3.4208 mL	6.8416 mL
	10 mM	0.3421 mL	1.7104 mL	3.4208 mL

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

BIOLOGICAL ACTIVITY

Description

MOMIPP, a macropinocytosis inducer, is a PIKfyve inhibitor. MOMIPP penetrates the blood-brain barrier (BBB)[1][2].

In Vitro

MOMIPP can induce intense macropinocytosis, leading to methuosis in cultured glioblastoma cells at low micromolar concentrations[1].

In U373 and Hs683 cell lines, 3 μM for MOMIPP induces cell vacuolization[1].

MOMIPP (10 μM) causes early disruptions of glucose uptake and glycolytic metabolism. MOMIPP selectively activates the JNK1/2 stress kinase pathway, resulting in phosphorylation of c-Jun, Bcl-2 and Bcl-xL[2].

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

Western Blot Analysis[2]

Cell Line:	U251 cells
Concentration:	10 μM
Incubation Time:	4 h or 24 h
Result:	Activated the JNK stress kinase pathway.

In Vivo

MOMIPP (80 mg/kg; i.p.; once daily; for 15 consecutive days) shows moderately effective in suppressing progression of intracerebral glioblastoma xenografts[2].

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

Animal Model:	Athymic CrTac:NCR-Foxn1 mice (female, 7-8 weeks)[2]
Dosage:	80 mg/kg
Administration:	i.p.; once daily; for 15 consecutive days
Result:	Suppressed progression of intracerebral glioblastoma xenografts.

REFERENCES

[1]. Margaux Colin, et al. Dysregulation of Macropinocytosis Processes in Glioblastomas May Be Exploited to Increase Intracellular Anti-Cancer Drug Levels: The Example of Temozolomide. Cancers (Basel). 2019 Mar 22;11(3):411.

[2]. Zehui Li, et al. The JNK signaling pathway plays a key role in methuosis (non-apoptotic cell death) induced by MOMIPP in glioblastoma. BMC Cancer. 2019 Jan 16;19(1):77.

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