NF-κB-IN-4

Cat. No.: HY-144765

Molecular Formula: $C_{18}H_{15}FN_4O$

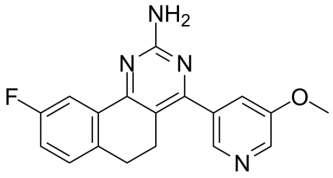
Molecular Weight: 322.34

Target: NF-κB; Apoptosis

Pathway: NF-κB; Apoptosis

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 : 100 mg/mL (310.23 mM; ultrasonic and warming and heat to 150°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1023 mL	15.5116 mL	31.0231 mL
	5 mM	0.6205 mL	3.1023 mL	6.2046 mL
	10 mM	0.3102 mL	1.5512 mL	3.1023 mL

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

BIOLOGICAL ACTIVITY

Description

NF-κB-IN-4 (compound 17) is a potent and BBB-penetrated NF-κB pathway inhibitor with blood brain barrier (BBB) permeability. NF-κB-IN-4 exhibits potential anti-neuroinflammatory activity with low toxicity. NF-κB-IN-4 can block the activation and phosphorylation of IκBα, reduce expression of NLRP3, and thus inhibit NF-κB activation. NF-κB-IN-4 can be used for neuroinflammation related diseases research[1].

In Vitro

NF-κB-IN-4 (compound 17) (0-10 μM, 24 h) shows high anti-inflammatory activity[1].

NF-κB-IN-4 (0-5 μM, 24 h) significantly decreases the LPS-induced p-IκBα expression levels, significantly inhibits the phosphorylation of IκBα and the expression of three proteins (NLRP3, ASC and caspase-1) in BV2 cells[1].

NF-κB-IN-4 (0-5 μM, 24 h) induces LPS-induced apoptosis in BV2 cells in a dose-dependent manner[1].

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

Cell Cytotoxicity Assay

Cell Line:	BV2 microglia cells[1]
Concentration:	0, 2.5, 5, 10 μM

Incubation Time:	24 h
Result:	Showed high anti-inflammatory activity, with the survival rate of BV2 microglia cells of 97.4%, inhibition rates against TNF-α and IL-6 release of 60.8% and 80.2%, respectively.
Western Blot Analysis	
Cell Line:	BV2 cells[1]
Concentration:	0, 1.25, 2.5, 5 μM
Incubation Time:	24 h
Result:	Significantly decreased the LPS-induced p-IκBα expression levels, significantly inhibited the phosphorylation of IκBα and the expression of three proteins (NLRP3, ASC and caspase-1) in BV2 cells.
Apoptosis Analysis	
Cell Line:	BV2 cells[1]
Concentration:	0, 2.5, 5 μM
Incubation Time:	24 h
Result:	Induced LPS-induced apoptosis in BV2 cells in a dose-dependent manner, with the apoptosis rates of 30.7% (2.5 μM) and 13.0% (5 μM), respectively.

REFERENCES

[1]. Zhang XF, et al. Anti-neuroinflammatory effects of novel 5,6-dihydrobenzo[h]quinazolin-2-amine derivatives in lipopolysaccharide-stimulated BV2 microglial cells. Eur J Med Chem. 2022;235:114322.

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