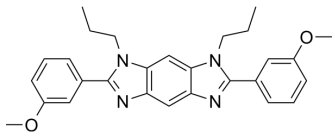
STAT3-IN-12

Cat. No.:	HY-150538
CAS No.:	2980758-31-2
Molecular Formula:	$C_{28}H_{30}N_4O_2$
Molecular Weight:	454.56
Target:	STAT; Apoptosis
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt; 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 (219.99 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1999 mL	10.9996 mL	21.9993 mL
	5 mM	0.4400 mL	2.1999 mL	4.3999 mL
	10 mM	0.2200 mL	1.1000 mL	2.1999 mL

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

BIOLOGICAL ACTIVITY

Description

STAT3-IN-12 is a potent STAT3 signal inhibitor that can inhibit IL-6 induced JAK/STAT3 signalling pathway activation. STAT3-IN-12 inhibits cancer cell growth, migration, and induce cell apoptosis as well as cycle arrest. STAT3-IN-12 can be used in cancer-related research, such as hepatocellular carcinoma (HCC) and oesophageal carcinoma[1].

IC_{50} & Target

STAT3

In Vitro

STAT3-IN-12 (compound 24, 0-10 μM approximately, 72 h) inhibits cancer cell growth and migration in HepG2 and EC109 cells[1].

STAT3-IN-12 (0-20 μM, 16 h) binds to the STAT3 protein and inhibits IL-6-mediated STAT3 phosphorylation, also inhibts STAT3 nuclear localization and dimerization in EC109 and HepG2 cells[1].

STAT3-IN-12 (0-20 μM, 48 h) induces cell apoptosis as well as cycle arrest in HepG2 and EC109 cells[1].

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

Cell Viability Assay[1]

Cell Line:	HepG2 and EC109 cells
Concentration:	0, 1.25, 2.5, 5 and 10 μM.
Incubation Time:	72 h
Result:	Inhibited cancer cell growth with IC_{50} values of 4.32 and 3.63 μM.

Cell Migration Assay [1]

Cell Line:	HepG2 and EC109 cells
Concentration:	0-10 μM
Incubation Time:	24 h
Result:	Inhibited cancer cell migration.

Western Blot Analysis[1]

Cell Line:	HepG2 and EC109 cells
Concentration:	0, 2.5, 5, 10 and 20 μM
Incubation Time:	16 h
Result:	Inhibited phosphorylation of STAT3 tyrosine 705 with high selectivity.

In Vivo

STAT3-IN-12 (compound 24, intraperitoneal injection, 20, 40 mg/kg, daily for 24 days) displays obvious antitumor activity in a mouse HepG2 cell xenograft tumor model without no obvious toxicity[1].

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

Animal Model:	HepG2 cell xenograft tumor model[1]
Dosage:	20, 40 mg/kg, daily for 24 days
Administration:	Intraperitoneal injection
Result:	Inhibited tumor growth without affecting the body weight.

REFERENCES

[1]. Yi-Chen Liu, et al. Benzobis(imidazole) derivatives as STAT3 signal inhibitors with antitumor activity.

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