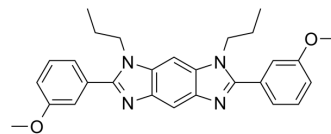


## STAT3-IN-12

<b>Cat. No.:</b>	HY-150538		
<b>Molecular Formula:</b>	C <sub>28</sub> H <sub>30</sub> N <sub>4</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	454.56		
<b>Target:</b>	STAT; Apoptosis		
<b>Pathway:</b>	JAK/STAT Signaling; Stem Cell/Wnt; Apoptosis		
<b>Storage:</b>	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)

Concentration	Mass		
	1 mg	5 mg	10 mg
<b>1 mM</b>	2.1999 mL	10.9996 mL	21.9993 mL
<b>5 mM</b>	0.4400 mL	2.1999 mL	4.3999 mL
<b>10 mM</b>	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<sup>[1]</sup>.

#### IC<sub>50</sub> & 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<sup>[1]</sup>.

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

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

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

Cell Viability Assay<sup>[1]</sup>

Cell Line: HepG2 and EC109 cells

Concentration:	0, 1.25, 2.5, 5 and 10 $\mu$ M.
Incubation Time:	72 h
Result:	Inhibited cancer cell growth with IC <sub>50</sub> values of 4.32 and 3.63 $\mu$ M.
Cell Migration Assay <sup>[1]</sup>	
Cell Line:	HepG2 and EC109 cells
Concentration:	0-10 $\mu$ M
Incubation Time:	24 h
Result:	Inhibited cancer cell migration.
Western Blot Analysis <sup>[1]</sup>	
Cell Line:	HepG2 and EC109 cells
Concentration:	0, 2.5, 5, 10 and 20 $\mu$ M
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<sup>[1]</sup>.

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

Animal Model:	HepG2 cell xenograft tumor model <sup>[1]</sup>
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.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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