

STAT3-IN-12

Chemical Properties

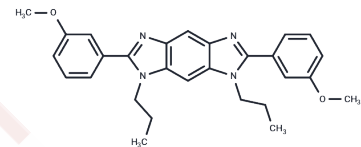
CAS No. : 2980758-31-2

Formula: C₂₈H₃₀N₄O₂

Molecular Weight: 454.56

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	STAT3-IN-12, a potent STAT3 signaling inhibitor, suppresses IL-6-induced JAK/STAT3 pathway activation. This compound inhibits cancer cell proliferation and migration while inducing apoptosis and cell cycle arrest, making it suitable for hepatocellular carcinoma (HCC) and esophageal cancer research.
Targets(IC50)	Apoptosis,STAT
In vitro	Methods: HepG2 and EC109 cells were treated with STAT3-IN-12 (0, 1.25, 2.5, 5, 10 μM, 16-72 hours) and subjected to cell viability assays, cell migration assays, and Western blotting. Results: STAT3-IN-12 inhibited the growth of HepG2 and EC109 cells with IC50 values of 4.32 μM and 3.63 μM, respectively. It selectively inhibited STAT3 tyrosine 705 phosphorylation after 16 hours of treatment. [1]
In vivo	Methods: STAT3-IN-12 (20, 40 mg/kg intraperitoneal injection, daily for 24 days) was used to treat HepG2 cell xenograft tumor model mice to study its effect on tumor growth in mice. Results: STAT3-IN-12 was able to inhibit tumor growth in mice without affecting the body weight of the mice. [1]

Solubility Information

Solubility	DMSO: 80 mg/mL (175.99 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1999 mL	10.9996 mL	21.9993 mL
5 mM	0.440 mL	2.1999 mL	4.3999 mL
10 mM	0.220 mL	1.100 mL	2.1999 mL
50 mM	0.044 mL	0.220 mL	0.440 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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