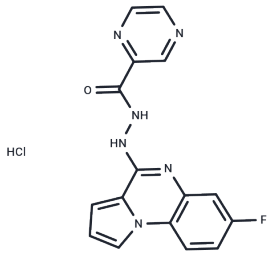
Data Sheet (Cat.No.T41260)

TargetMol

SC144 hydrochloride

Chemical Properties



CAS No. : 917497-70-2

Formula: C16H12ClFN6O

Molecular Weight: 358.76

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	SC144 hydrochloride, a first-in-class, orally active, small-molecule gp130 (IL6-beta) inhibitor, demonstrates potent inhibition of gp130 ligand-triggered signaling. By binding to gp130, it initiates gp130 phosphorylation (S782) and deglycosylation, impedes Stat3 phosphorylation and nuclear translocation, and suppresses the expression of downstream target genes. Furthermore, SC144 hydrochloride effectively induces apoptosis in human ovarian cancer cells [1].
Targets(IC50)	Apoptosis,Others,Interleukin
In vitro	SC144 effectively inhibits the growth of various human ovarian cancer cell lines, demonstrating promising results with IC50 values within the submicromolar range for OVCAR-8, OVCAR-5, and OVCAR-3 cells (0.72, 0.49, 0.95 μM, respectively) [1]. Its efficacy extends to combating drug-resistant strains of ovarian cancer, including NCI/ADR-RES (Paclitaxel- and Doxorubicin-resistant, IC50=0.43 μM) and HEY (Cisplatin-resistant, IC50=0.88 μM), showcasing its potential to override resistance mechanisms [1]. Furthermore, SC144 at a concentration of 2 μM for 24 hours induces significantly higher apoptosis in OVCAR-8 and Caov-3 cancer cell lines compared to normal kidney epithelial and endometrial cells, emphasizing its selective cytotoxicity towards ovarian cancer cells [1]. The compound also promotes the phosphorylation of gp130 (S782), a key process in cell signaling, in a time- and dose-dependent manner when applied in concentrations ranging from 0.5 to 2 μM over a period of 0 to 6 hours [1]. The cytotoxic action of SC144 is attributed to the impairment of gp130 function, which in turn deactivates Akt and Stat3 signaling pathways and inhibits Stat3-mediated gene expression, leading to cell cycle arrest, anti-angiogenesis, and apoptosis [1].
In vivo	SC144, administered intraperitoneally (i.p.) at a dosage of 10 mg/kg daily for 58 days, significantly delays tumor growth in athymic mice with human ovarian cancer xenografts, inhibiting growth by approximately 73% [1]. When given orally (p.o.) at a dosage of 100 mg/kg daily for 35 days, SC144 treatment results in an average tumor volume that is 82% smaller compared to that of the control group.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7874 mL	13.9369 mL	27.8738 mL
5 mM	0.5575 mL	2.7874 mL	5.5748 mL
10 mM	0.2787 mL	1.3937 mL	2.7874 mL
50 mM	0.0557 mL	0.2787 mL	0.5575 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.

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