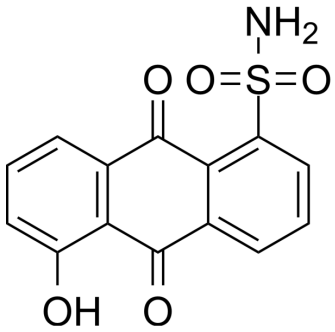
LLL12

Cat. No.:	HY-19536
CAS No.:	1260247-42-4
Molecular Formula:	$C_{14}H_9NO_5S$
Molecular Weight:	303.29
Target:	STAT
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (329.72 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2972 mL	16.4859 mL	32.9717 mL
	5 mM	0.6594 mL	3.2972 mL	6.5943 mL
	10 mM	0.3297 mL	1.6486 mL	3.2972 mL

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

In Vivo

1. Add each solvent one by one: 2% DMSO >> 40% PEG300 >> 5% Tween-80 >> 53% saline
   Solubility: 0.5 mg/mL (1.65 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

LLL12 is a small molecule inhibitor of STAT3 that inhibits STAT3 phosphorylation. LLL12 enhanced the inhibitory effect of Cisplatin (HY-17394) and Paclitaxel (HY-B0015) on ovarian cancer cell formation, migration, and growth[1].

IC_{50} & Target

p-STAT3

In Vitro

LLL12 (0.01-1 μM; 72 h) inhibits cell viability of ovarian cancer cell lines with or without Cisplatin (0.5 μM, 2.5 μM) and Paclitaxel (0.25 μM, 0.5 μM).[1].
LLL12 (0.25-1.0 μM; 72 h) inhibit STAT3 phosphorylation (Tyr705) in ovarian cancer cell lines[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	A2780, SKOV3, CAOV-3 and OVCAR5 ovarian cancer cell lines

Concentration:	0.25, 0.5, and 1 μM for A2780 and OVCAR5; 1, 2.5, and 5 μM for SKOV3 and CAOV-3
Incubation Time:	72 hours
Result:	Inhibited STAT3 phosphorylation at Tyr705.

In Vivo

LLL12 (5 mg/kg; i.p.; once daily for 13 d) shows strong growth inhibition activity in mouse osteosarcoma cells and tumor growth[2].

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

Animal Model:	Mouse xenografts with SJSA or OS-33 osteosarcoma cells[2]
Dosage:	5 mg/kg
Administration:	Intraperitoneal injection; once daily for 13 days
Result:	Resulted in a significant reduction in tumor volume and tumor mass in the OS-33 and SJSA xenografted mice.

REFERENCES

[1]. Zhang R, et al. A small molecule STAT3 inhibitor, LLL12, enhances cisplatin‐ and paclitaxel‐mediated inhibition of cell growth and migration in human ovarian cancer cells. Oncol Rep. 2020 Sep;44(3):1224-1232.

[2]. Onimoe GI, et al. Small molecules, LLL12 and FLLL32, inhibit STAT3 and exhibit potent growth suppressive activity in osteosarcoma cells and tumor growth in mice. Invest New Drugs. 2012 Jun;30(3):916-26.

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