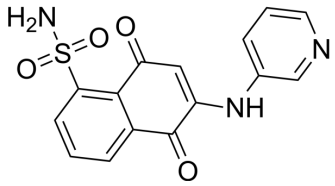
LY5

Cat. No.:	HY-12442
CAS No.:	1436382-03-4
Molecular Formula:	$C_{15}H_{11}N_3O_4S$
Molecular Weight:	329.33
Target:	STAT; Apoptosis
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	LY5 is a STAT3 inhibitor with an IC_{50} value of 0.5 μM. LY5 induces apoptosis and inhibits STAT3 phosphorylation. LY5 shows antitumor activity in vivo, it can be used for the research of cancer[1].
IC_{50} & Target	IC50: 0.5 μM (STAT3)[1]

In Vitro

LY5 shows inhibition effects to U2OS, RH30 and RD2 cancer cells with IC_{50} values of 0.52, 0.55 and 1.39 μM, respectively[1].
LY5 (0.25-1 μM; 16 h) induces apoptosis and inhibits STAT3 phosphorylation in human sarcoma cancer cells[1].
LY5 (0.25-1 μM; 5 h) inhibits STAT3 phosphorylation induced by IL-6[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	RH30 and EW8 cell lines
Concentration:	0.25-1 μM
Incubation Time:	16 hours
Result:	Completely inhibited Tyr705 phosphorylation at 0.5 μM and dose-dependently decreased in formation of P-STAT3.

In Vivo

LY5 (5 mg/kg; i.p. once daily for 21 days) inhibits breast tumor growth in vivo[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Nude mice with MDA-MB-231 cancer cells injection[1]
Dosage:	5 mg/kg
Administration:	Intraperitoneal injection; 5 mg/kg; once daily; for 21 days
Result:	Suppressed tumor growth and significantly reduced the tumor sizes.

REFERENCES

[1]. Yu W, et al. Discovery of novel STAT3 small molecule inhibitors via in silico site-directed fragment-based drug design. J Med Chem. 2013 Jun 13;56(11):4402-12.

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