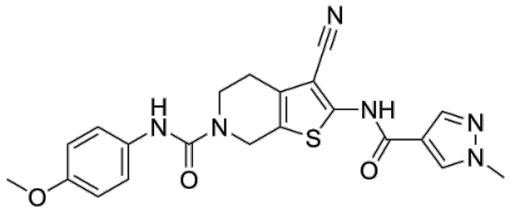
Product Data Sheet

Product Name: STAT3-IN-13
Cat. No.: GC73311

Chemical Properties

Cas. No.	2248552-86-3		
Formula	$C_{21}H_{20}N_6O_3S$	M.Wt	436.49
Solubility	DMSO : 125 mg/mL (286.38 mM; Need ultrasonic)	Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			



Background

STAT3-IN-13 (compound 6f) is a potent STAT3 inhibitor. STAT3-IN-13 has anti-proliferative effects and binds to the STAT3 SH2 domain with a KD of 0.46 μM. STAT3-IN-13 inhibits the phosphorylation

of STAT3 Y705 and downstream target gene expression. STAT3-IN-13 induces apoptosis in vitro and suppresses the growth and metastasis of tumor in vivo. STAT3-IN-13 can be used for cancer research.

STAT3-IN-13 (compound 6f) (48 hours) has anti-proliferative activity with IC50 values of 0.25, 0.11 and 0.55 μM for 143B, HOS and MG63 cells, respectively[1].STAT3-IN-13 (compound 6f) (0.001-100 μM) binds to STAT3 and interacts with STAT3586–685 in a concentration dependent manner with a KD of 0.96 μM[1].STAT3-IN-13 (compound 6f) (0-1.0 μM; 24 hours; 143B and HOS cells) inhibits STAT3 Y705 phosphorylation and suppresses STAT3 in tumor cells[1].STAT3-IN-13 (compound 6f) (0-1.0 μM; 48 hours; 143B cells) induces apoptosis in a dose-dependent manner[1].

STAT3-IN-13 (compound 6f) (10-20 mg/kg; i.p.; twice daily, for 4 weeks; nude mice) blocks osteosarcoma growth and metastasis in vivo[1].

References:
[1]. Jin W, et, al. Discovery of 2-Amino-3-cyanothiophene Derivatives as Potent STAT3 Inhibitors for the Treatment of Osteosarcoma Growth and Metastasis. J Med Chem. 2022 May 12;65(9):6710-6728.