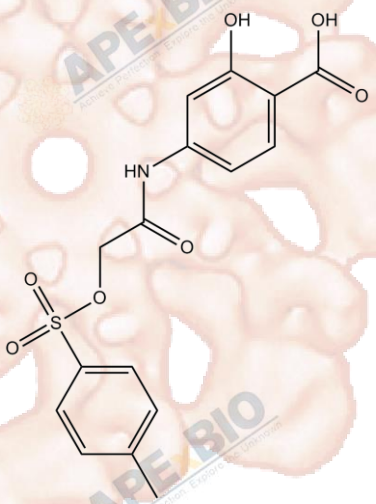
Product Data Sheet

NSC 74859

Cat. No.:	A8338
CAS No.:	501919-59-1
Formula:	C16H15NO7S
M.Wt:	365.36
Synonyms:	S3I-201;NSC74859;NSC-74859;S3I 201
Target:	JAK/STAT Signaling
Pathway:	STAT
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

insoluble in H2O; ⩾18.25 mg/mL in DMSO; ⩾2.2 mg/mL in EtOH with gentle warming

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.7370 mL	13.6851 mL	27.3703 mL
5 mM	0.5474 mL	2.7370 mL	5.4741 mL
10 mM	0.2737 mL	1.3685 mL	2.7370 mL

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

Biological Activity

Shortsummary	Stat3 inhibitor
IC_{50} & Target	86 μM (Stat3)

In Vitro

Cell Viability Assay

Cell Line:	NIH 3T3/v-Src cells
Preparation method:	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while.Stock solution can be stored below

		-20°C for several months.
	Reacting conditions:	100 μM, 24 hours
	Applications:	Viral Src transformed (NIH 3T3/v-Src) mouse fibroblasts stably expressing Stat3-YFP were transiently transfected with Flag-Stat3, treated with NSC-74859, and then subjected to pull-down assay and SDS/PAGE. Western blot analysis for FLAG of whole-cell lysates shows equal expression of the FLAG-ST3 protein in the lysates in the transiently transfected cells in both the control and NSC-74859-treated cells. Western blot analysis probing with anti-FLAG antibody showed no detectable level of FLAG-ST3 protein in the Stat3-YFP immunoprecipitates from NSC-74859-treated cells, suggesting the disruption by NSC-74859 of the complex formation between Stat3-YFP and FLAG-ST3 proteins.
In Vivo	**Animal experiment**	
	Animal models:	Female athymic nude mice injected with MDA-MB-231 cells
	Dosage form:	Intravenous injection, 5 mg/kg every 2 or 3 days for 2 weeks
	Applications:	Compared with control (vehicle-treated) tumors, which continued to grow, human breast tumors in mice that received NSC-74859 displayed strong growth inhibition. Continued evaluation of treated mice on termination of treatment showed no resumption of tumor growth, suggesting potentially a long-lasting effect of NSC-74859 on tumor growth.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Deng R, Zhang P, et al. "HDAC is indispensable for IFN-γ-induced B7-H1 expression in gastric cancer." Clin Epigenetics. 2018 Dec 11;10(1):153.PMID:30537988

2. Xu J, Li Y, et al. "Baicalinregulates SirT1/STAT3 pathway and restrains excessive hepatic glucose production."Pharmacol Res. 2018 Aug 23;136:62-73.PMID:30144531

3. Yang L, Xu J, et al. "Porcine epidemic diarrhea virus-induced epidermal growth factor receptor activation impairs the antiviral activity of type I interferon." J Virol. 2018 Jan 31. pii: JVI.02095-17.PMID:29386292

4. Zhang ZL, Jiang QC, et al. "Schisandrin A reverses doxorubicin-resistant human breast cancer cell line by the inhibition of P65 and Stat3 phosphorylation."Breast Cancer. 2017 Nov 27.PMID:29181822

5. Marie R.Mooney."Precision Medicine Approaches to Integrating Genomics with Cancer Therapy: Applications in Glioblastoma and Lymphoma." ProQuest LLC..2016

See more customer validations on www.apexbt.com.

References

[1] Siddiquee K, Zhang S, Guida W C, et al. Selective chemical probe inhibitor of Stat3, identified through structure-based virtual screening, induces antitumor activity. Proceedings of the National Academy of Sciences, 2007, 104(18): 7391-7396.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com