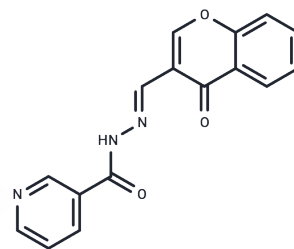


STAT5-IN-1

Chemical Properties

CAS No. :	285986-31-4
Formula:	C ₁₆ H ₁₁ N ₃ O ₃
Molecular Weight:	293.28
Appearance:	no data available
Storage:	store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	STAT5-IN-1 (STAT5 Inhibitor) is a cell-permeable inhibitor which suppresses Stat5 via binding to the SH2 domain.
Targets(IC ₅₀)	STAT
In vitro	The chemical compound STAT5-IN-1 serves as an inhibitor of Signal Transducer and Activator of Transcription 5 (STAT5), a protein crucial for cell growth and differentiation. By attaching to the SH2 domain of STAT5, it selectively impedes its activity. While it also affects STAT3, STAT1, and the Lck tyrosine kinase, this inhibition is significantly less pronounced (IC ₅₀ > 500 μM). Additionally, STAT5-IN-1 effectively prevents the interaction between STAT5 and DNA within K562 nuclear extracts. Notably, modifying the chromone ring's C6 hydrogen to an ethyl group in STAT5-IN-1 does not diminish its efficacy against STAT5β; however, it eradicates its selectivity towards other STAT family members.

Solubility Information

Solubility	DMSO: 50 mg/mL (170.49 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4097 mL	17.0486 mL	34.0971 mL
5 mM	0.6819 mL	3.4097 mL	6.8194 mL
10 mM	0.341 mL	1.7049 mL	3.4097 mL
50 mM	0.0682 mL	0.341 mL	0.6819 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.

Reference

Müller J, et al. Discovery of chromone-based inhibitors of the transcription factor STAT5. *Chembiochem*. 2008 Mar 25;9(5):723-7.

Chen C, Lu M, Lin S, et al. The nuclear gene rpl18 regulates erythroid maturation via JAK2-STAT3 signaling in zebrafish model of Diamond-Blackfan anemia. *Cell Death & Disease*. 2020, 11(2): 1-11

Chen C, Lu M, Lin S, et al. The nuclear gene rpl18 regulates erythroid maturation via JAK2-STAT3 signaling in zebrafish model of Diamond-Blackfan anemia[J]. *Cell Death & Disease*. 2020, 11(2): 1-11.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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