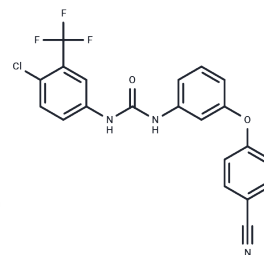


SC-43

Chemical Properties

CAS No. : 1400989-25-4
 Formula: C₂₁H₁₃ClF₃N₃O₂
 Molecular Weight: 431.8
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	SC-43 is a potent and orally active agonist of SHP-1 (PTPN6). SC-43 inhibits the phosphorylation of STAT3 and induces cell apoptosis, and with anti-fibrotic and anticancer effects.
Targets(IC50)	Apoptosis,STAT,Phosphatase
In vitro	SC-43, a sorafenib derivative.SC-43-induced apoptosis in cholangiocarcinoma (CCA) via a novel mechanism.?Three CCA cell lines (HuCCCT-1, KKU-100 and CGCCA) were treated with SC-43 to determine their sensitivity to SC-43-induced cell death and apoptosis.?SC-43 activated SH2 domain-containing phosphatase 1 (SHP-1) activity, leading to p-STAT3 and downstream cyclin B1 and Cdc2 downregulation, which induced G2-M arrest and apoptotic cell death.?Importantly, SC-43 augmented SHP-1 activity by direct binding to N-SH2 and relief of its autoinhibition.?Deletion of the N-SH2 domain (dN1) or point mutation (D61A) of SHP-1 counteracted the effect of SC-43-induced SHP-1 phosphatase activation and antiproliferation ability in CCA cells[1].
In vivo	In vivo assay revealed that SC-43 exhibited xenograft tumor growth inhibition, p-STAT3 reduction and SHP-1 activity elevation[1].

Solubility Information

Solubility	DMSO: 250 mg/mL (578.97 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (7.64 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3159 mL	11.5794 mL	23.1589 mL
5 mM	0.4632 mL	2.3159 mL	4.6318 mL
10 mM	0.2316 mL	1.1579 mL	2.3159 mL
50 mM	0.0463 mL	0.2316 mL	0.4632 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Ming-Hung Hu, et al. Targeting SHP-1-STAT3 signaling: A promising therapeutic approach for the treatment of cholangiocarcinoma. *Oncotarget*. 2017 May 10;8(39):65077-65089.

Tung-Hung Su, et al. Src-homology protein tyrosine phosphatase-1 agonist, SC-43, reduces liver fibrosis. *Sci Rep*. 2017 May 11;7(1):1728.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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