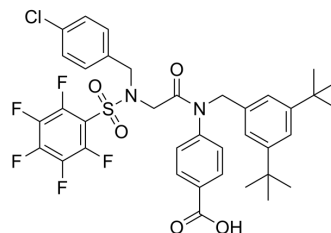


AC-4-130

Cat. No.:	HY-124500		
CAS No.:	1834571-82-2		
Molecular Formula:	C ₃₇ H ₃₆ ClF ₅ N ₂ O ₃ S		
Molecular Weight:	751.2		
Target:	STAT; Apoptosis		
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt; Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (133.12 mM; Need ultrasonic)
 H₂O : < 0.1 mg/mL (ultrasonic) (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.3312 mL	6.6560 mL	13.3120 mL
	5 mM	0.2662 mL	1.3312 mL	2.6624 mL
	10 mM	0.1331 mL	0.6656 mL	1.3312 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (3.33 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

AC-4-130 is a potent STAT5 SH2 domain inhibitor. AC-4-130 directly binds to STAT5 and disrupts STAT5 activation, dimerization, nuclear translocation, and STAT5-dependent gene transcription. AC-4-130 induces cell cycle arrest and apoptosis in FLT3-ITD-driven leukemic cells. AC-4-130 has anti-cancer activity and can efficiently block pathological levels of STAT5 activity in acute myeloid leukemia (AML)^[1].

IC₅₀ & Target

STAT5

In Vitro

AC-4-130 (0.1-100 μM; 72 hours) leads to a significant increase in apoptosis in a dose-dependent and time-dependent manner in MV4-11 or MOLM-13 cells^[1].
 ?AC-4-130 (2, 5 μM; 72 hours) induces cell cycle arrest with an increase in G0/G1 arrested cells and a concomitant reduction in cells in S or G2/M^[1].

?AC-4-130 (0.5-2; 24 hours) reveals reduced pY-STAT5 levels both in the cytoplasm and nucleus^[1].

?AC-4-130-mediated STAT5 inhibition efficiently blocks the proliferation and clonogenic growth of primary human AML cells, while healthy CD34+ cells are less sensitive^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Cancer. 2023 Aug;4(8):1193-1209.
- PLoS Pathog. 2022 Oct 25;18(10):e1010913.
- Research Square Print. 2022 Aug.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Bettina Winkelhofer, et al. Pharmacologic inhibition of STAT5 in acute myeloid leukemia. Leukemia. 2018 May;32(5):1135-1146.

Caution: Product has not been fully validated for medical applications. For research use only.

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