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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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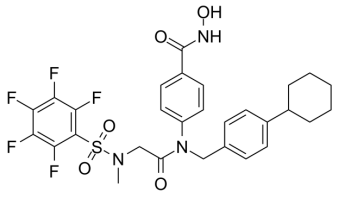
SH5-07

Cat. No.:	HY-100494
CAS No.:	1456632-41-9
Molecular Formula:	$C_{29}H_{28}F_5N_3O_5S$
Molecular Weight:	625.61
Target:	STAT
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt
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 : 50 mg/mL (79.92 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.5984 mL	7.9922 mL	15.9844 mL
	5 mM	0.3197 mL	1.5984 mL	3.1969 mL
	10 mM	0.1598 mL	0.7992 mL	1.5984 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (4.00 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.00 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SH5-07 is a hydroxamic acid based Stat3 inhibitor with an IC_{50} of 3.9 μM in in vitro assay[1].

IC_{50} & Target

STAT3
3.9 μM (IC_{50})

In Vitro

SH5-07 is a hydroxamic acid analog of BP-1-102. SH5-07 dose-dependently inhibits Stat3 activity with an IC_{50} of 3.9±0.6 μM in in vitro assay. It preferentially inhibits Stat3:Stat3 DNA-binding activity, ahead of inhibiting Stat1:Stat3 activity, with minimal effects on Stat1:Stat1 activity. SH5-07 binds Stat3, disrupts Stat3 association with growth factor receptor, and thereby inhibits Stat3 phosphorylation. It induces antitumor cell effects against malignant cells harboring constitutively-active Stat3. SH5-07 inhibits the expression of known Stat3-regulated genes. Bcl-2, Bcl-xL, c-Myc, Survivin, Cyclin D1 and

	Mcl-1 expression is reduced in response to 24 h, 5 μM SH5-07 treatment[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Tail vein injection or oral gavage delivery of SH5-07 or SH4-54 inhibits growth of 90-150 mm^3 established subcutaneous mouse xenografts of human glioma (U251MG) and breast (MDA-MB-231) tumors that harbor aberrantly-active Stat3, associated with decreased c-Myc, Mcl-1 and Cyclin D1 expression. No significant changes in body weights, blood cell counts, or the gross anatomy of organs, or obvious signs of toxicity are observed[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	Cells are treated with 0-8 μM agent for 24-48 h. For cell cycle profile analysis, cells are harvested and fixed with 70% ice-cold ethanol and stained with propidium iodide (PI). For apoptosis analysis, cells are collected and stained with FITC-Annexin V using Apoptosis Detection Kit. Both the DNA content of cells and the Annexin V-positive cells are analyzed by FACScan flow cytometer. Cell cycle phase distribution is analyzed using the Cell-Fit program. Data acquisition is gated to exclude cell doublets[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [1]	Mice: Mice are injected subcutaneously in the left flank area with U251MG cells in 200 μL of PBS/Matrigel matrix, or MDA-MB-231 cells in 100 μL of PBS. Mice with tumors of 90-150 mm^3 (MDA-MB-231) or 150 mm^3 (U251MG) are grouped for identical mean tumor sizes, administered 3, 5 or 6 mg/kg SH5-07 or SH4-54 via oral gavage daily or tail vein injection every 2 or 3 days, and monitored every 3-7 days. Tumor sizes are measured with calipers and converted to tumor volume[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Mediators Inflamm. 2022 Sep 13;2022:9603989.

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REFERENCES

[1]. Yue P,et al. Hydroxamic Acid and Benzoic Acid-Based STAT3 Inhibitors Suppress Human Glioma and Breast Cancer Phenotypes In Vitro and In Vivo. Cancer Res. 2016 Feb 1;76(3):652-63.

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