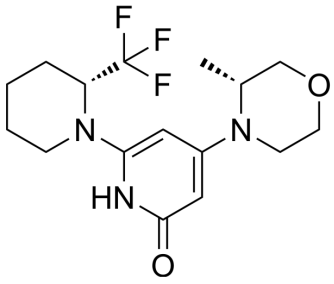
SB02024

Cat. No.:	HY-122891
CAS No.:	2126737-28-6
Molecular Formula:	$C_{16}H_{22}F_3N_3O_2$
Molecular Weight:	345.36
Target:	PI3K; CXCR; STAT
Pathway:	PI3K/Akt/mTOR; GPCR/G Protein; Immunology/Inflammation; JAK/STAT Signaling; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

SB02024 is a potent and orally active VPS34 inhibitor. SB02024 inhibits Vps34 kinase activity. SB02024 induces CCL5 and CXCL10 via STAT1/IRF7. SB02024 shows anticancer activity[1][2][3].

IC_{50} & Target

Vps34	STAT1

In Vitro

SB02024 (5 μM, 48 h) induces CCL5 and CXCL10 via STAT1/IRF7 in B16-F10 and CT26 tumor cells[1].

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

Western Blot Analysis[1]

Cell Line:	B16-F10 and CT26 tumor cells
Concentration:	5 μM
Incubation Time:	48 h
Result:	Significantly up-regulates both Ccl5/Rantes and Cxcl10/IP10 mRNA and their corresponding secreted protein levels in YUMM cells, B16-F10 and CT26 tumor cells. Showed an induction of phospho-signal transducer and activator of transcription 1 (pSTAT1) and increased protein and mRNA expression of STAT1, IRF1 and IRF7.

In Vivo

SB02024 (20 mg/kg, Oral gavage) decreases the tumor growth and improves the effect benefit of anti-PD-L1/PD-1[1]. SB02024 increases the levels of CCL5 and CXCL10 in the blood plasma of B16-F10 and CT26 tumor-bearing mice, but dose not increase CCL5 or CXCL10 levels in the blood of non-tumor-bearing mice[1].

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

Animal Model:	C57BL/6, BALB/C, immunodeficient NSG mice (7 weeks old)[1]
Dosage:	20 mg/kg
Administration:	Oral gavage
Result:	Decreased the tumor growth and weight of B16-F10 and CT26 and prolonged the survival of tumor-bearing mice.

REFERENCES

[1]. Noman MZ, et al. Inhibition of Vps34 reprograms cold into hot inflamed tumors and improves anti-PD-1/PD-L1 immunotherapy. Sci Adv. 2020 Apr 29;6(18):eaax7881.

[2]. Yu Y, et al. Combining VPS34 inhibitors with STING agonists enhances type I interferon signaling and anti-tumor efficacy. Mol Oncol. 2024 Mar 20.

[3]. Bassam Claude JANJI, et al. Biomarker. Patent WO2020008046 A1.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA