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Produktinformation

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- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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OTUB2-IN-1

Cat. No.: HY-160768

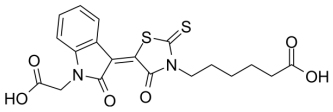
Molecular Formula: $C_{19}H_{18}N_2O_6S_2$

Molecular Weight: 434.49

Target: Deubiquitinase

Pathway: Cell Cycle/DNA Damage

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (115.08 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3015 mL	11.5077 mL	23.0155 mL
	5 mM	0.4603 mL	2.3015 mL	4.6031 mL
	10 mM	0.2302 mL	1.1508 mL	2.3015 mL

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

BIOLOGICAL ACTIVITY

Description

OTUB2-IN-1, a specific inhibitor of OTUB2 (K_D: ~12 μM), reduces PD-L1 protein expression in tumor cells and inhibits tumor growth by promoting robust intra-tumor infiltration of cytotoxic T lymphocytes (CTL) [1].

In Vitro

OTUB2-IN-1 (0-40 μM) reduces PD-L1 levels in tumor cells (NCI-H358, SK-MES-1, and NCI-H226) in a dose-dependent manner, but it is unable to affect OTUB2 stability[1].
OTUB2-IN-1 (0-50 μM; 1 h) does not interfere with protein interactions between OTUB2 and PD-L1[1].
OTUB2-IN-1 (10 μM; 0-4 d) can't inhibit the viability of B16-F10 tumor cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	B16-F10 tumor cells
Concentration:	10 μM
Incubation Time:	0-4 d
Result:	OTUB2-IN-1 did not show significant inhibitory effects on the viability of B16-F10 tumor

	cells over a period of up to four days.
Western Blot Analysis[1]	
Cell Line:	NCI-H358、SK-MES-1, NCI-H226
Concentration:	0-40 μM
Incubation Time:	
Result:	Reduced PD-L1 levels in a dose-dependent manner across these cell lines, indicating effective inhibition of OTUB2's functional activity regarding PD-L1 stabilization. However, it did not affect the stability of OTUB2 itself, suggesting that the inhibitor specifically disrupts the PD-L1 regulatory function of OTUB2 without altering OTUB2 protein stability.

In Vivo

OTUB2-IN-1 (20 mg/kg; i.p.; daily for five days) suggests the potential to enhance immune recognition and immune response of tumor cells in mice implanted with B16-F10 cells[1].

OTUB2-IN-1 (20 mg/kg; i.p.; daily for five days) reduces the expression of YAP and phosphorylated p65 in mice implanted with LL/2 cells; reduces phosphorylated Akt expression in mice implanted with B16-F10 cells and it reduces phosphorylated p65 expression in mice implanted with KLN205 cells[1].

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

Animal Model:	C57BL/6 mice implanted with B16-F10 cells or LL/2 cells [1]
Dosage:	20 mg/kg; daily for five days
Administration:	i.p
Result:	Reduced the expression of PD-L1 on tumor cells, suggesting its potential in enhancing immune recognition and response against tumor cells. Did not significantly impact tumor cell viability directly, indicating its action might be more about modulating immune evasion mechanisms rather than cytotoxic effects. Increased the infiltration of cytotoxic T cells within the tumors, suggesting that reducing PD-L1 levels can indeed make the tumor more susceptible to immune attack.within the tumors, suggesting that reducing PD-L1 levels can indeed make the tumor more susceptible to immune attack.

REFERENCES

[1]. Ren W et al. Pharmaceutical targeting of OTUB2 sensitizes tumors to cytotoxic T cells via degradation of PD-L1. Nat Commun. 2024 Jan 2;15(1):9.

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