PD-L1-IN-6

Cat. No.: HY-162399

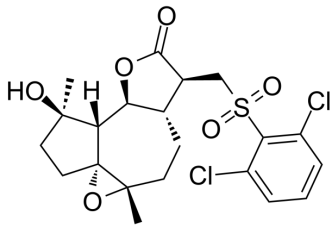
Molecular Formula: $C_{21}H_{24}Cl_2O_6S$

Molecular Weight: 475.38

Target: PD-1/PD-L1; STAT

Pathway: 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

PD-L1-IN-6 (Compound 16) is an orally active inhibitor for PD-L1 expression in neutrophil by targeting STAT3 with K_D of 90.5 nmol/L. PD-L1-IN-6 promotes neutrophil-mediated antifungal immunoresponse[1].

In Vitro

PD-L1-IN-6 (40 μM) inhibits 80.17% PD-L1 expression at 40 μM without significant cytotoxicity in neutrophil[1].
PD-L1-IN-6 is slight permeable for blood brain barrier, with a p_e of 1.22×10^{-6} cm/s[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	Murine neutrophil
Concentration:	40 μM
Incubation Time:	
Result:	Maintained 81.52% cell viability at 40 μM.

In Vivo

PD-L1-IN-6 (50-100 mg/kg, p.o. for 3 days) inhibits β-glucaninduced secretion of CXCL1 and CXCL2, induces the neutrophil mobilization, enhances neutrophil-mediated antifungal immunity in C. albicans infected C57BL/6 mice[1].

Pharmacokinetic Analysis of PD-L1-IN-6 in Sprague-Dawley rats[1]

route	Dose (mg/kg)	C_{max} (ng/mL)	$T_{1/2}$ (h)	T_{max} (h)	AUC_{0-t} (ng·h/mL)	AUC_{0-inf} (ng·h/mL)	CL (mL/min/kg)	MRT_{0-t} (h)	V_{ss} (L/kg)	F (%)
po	10	113.52	1.46	0.33	166.57	182.25	-	1.74	-	45.1
iv	2	174.78	0.17	0.14	73.87	75.44	453.10	0.25	7.46	-

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

Animal Model:	C. albicans infected C57BL/6 mice[1]

Dosage:	50-100 mg/kg
Administration:	p.o. for 3 days
Result:	Inhibited secretion of CXCL1 and CXCL2, and accumulation of neutrophils in bone marrow. Caused reduced fungal burden and increased infiltrationn rate of neutrophils in kidney.

REFERENCES

[1]. Lu X, et al., Drug Repurposing of ACT001 to Discover Novel Promising Sulfide Prodrugs with Improved Safety and Potent Activity for Neutrophil-Mediated Antifungal Immunotherapy. J Med Chem. 2024 Mar 25.

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