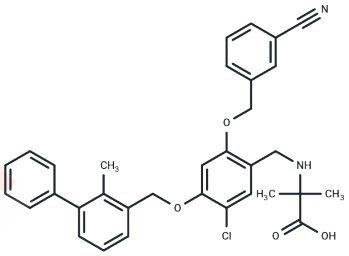
Data Sheet (Cat.No.T36900)

TargetMol

PD-1/PD-L1-IN-NP19

Chemical Properties



CAS No. : 2377916-66-8

Formula: C33H31ClN2O4

Molecular Weight: 555.06

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	PD-1/PD-L1-IN-NP19, a PD-1/PD-L1 inhibitor, exhibits an IC50 of 12.5 nM against the human PD-1/PD-L1 interaction, potentially activating the tumor immune microenvironment and contributing to its antitumor effects[1].
Targets(IC50)	PD-1/PD-L1
In vitro	PD-1/PD-L1-IN-NP19 (compound NP19) (0.37-10 μM; 72 h) significantly elevates IFN-γ production in a dose-dependent manner from T cells co-cultured with tumor cells[1]. PD-1/PD-L1-IN-NP19 exhibits much lower activity for inhibiting mouse PD-1/PD-L1 interaction (IC50 >1 μM) compared to human PD-1/PD-L1 interaction (IC50=12.5 nM)[1]. PD-1/PD-L1-IN-NP19 (10 μM; 48 h) shows no apparent cytotoxic effects on A549, MCF-7, and B16-F10 cells at a concentration of 10 μM[1].
In vivo	PD-1/PD-L1-IN-NP19 (compound NP19) (25-100 mg/kg; intragastric gavage once daily for 15 days) significantly inhibits melanoma tumor growth in mice. Additionally, PD-1/PD-L1-IN-NP19 (25 mg/kg; i.p. daily for 14 days) exhibits substantial antitumor efficacy with a tumor growth inhibition (TGI) of 76.5% and is well-tolerated in an H22 hepatoma mouse model. In rats, PD-1/PD-L1-IN-NP19 (1 mg/kg; i.v.) has a half-life (t1/2) of 1.5±0.5 hours, clearance rate (CL) of 0.9±0.2 L/h/kg, and an apparent distribution volume (Vss) of 2.1±0.5 L/kg. Furthermore, when administered orally at 10 mg/kg, PD-1/PD-L1-IN-NP19 shows an absorption time (Tmax) of 0.6±0.2 hours, a long half-life (t1/2) of 10.9±7.7 hours, and an oral bioavailability (F) of 5% in rats.

Solubility Information

Solubility	DMSO: 1.8 mg/mL (3.24 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8016 mL	9.008 mL	18.0161 mL
5 mM	0.3603 mL	1.8016 mL	3.6032 mL
10 mM	0.1802 mL	0.9008 mL	1.8016 mL
50 mM	0.036 mL	0.1802 mL	0.3603 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Cheng B, et, al. Discovery of Novel Resorcinol Dibenzyl Ethers Targeting the Programmed Cell Death-1/Programmed Cell Death-Ligand 1 Interaction As Potential Anticancer Agents. J Med Chem. 2020 Jul 15.