Data Sheet (Cat.No.T216834)

TargetMol

PROTAC Sirt2 Degrader-2

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Keep away from direct sunlight
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	PROTACSirt2 Degrader-2 is a potent and selective PROTAC degrader that targets SIRT2. It exhibits strong antiproliferative activity both in vitro and in vivo. This compound significantly enhances H4K16Ac levels and effectively inhibits colony formation and migration, induces cell cycle arrest, and promotes apoptosis. By indirectly degrading SIRT2 and blocking downstream protein phosphorylation, PROTACSirt2 Degrader-2 disrupts the AKT/mTOR signaling pathway, impeding signaling cascades and inhibiting tumor progression. This compound is used in ovarian cancer research.
Targets(IC50)	Apoptosis,Akt,mTOR,PROTACs,Sirtuin
In vitro	PROTAC Sirt2 Degrader-2 (Compound W10) exhibits strong antiproliferative activity and high selectivity against various ovarian cancer cell lines, such as SKOV3 (IC50 = 0.33 μM), OVCAR3 (IC50 = 0.25 μM), and A2780 (IC50 = 0.08 μM), while showing low toxicity towards normal cells like IOSE80 (CC50 = 2.64 μM). It efficiently and selectively degrades the SIRT2 protein in A2780 ovarian cancer cells at concentrations between 0.01-20 μM over 6-48 hours, with its action being concentration- and time-dependent, although a hook effect may occur at higher concentrations. Within an hour, it enhances the thermal stability of SIRT2 in A2780 cells, indicating direct binding and structural stabilization. PROTAC Sirt2 Degrader-2 also inhibits colony formation in a concentration-dependent manner over 14 days within a range of 0.01-5 μM. It causes cell cycle arrest at the S and G2/M phases in A2780 cells within 36 hours at concentrations of 0.01-10 μM. Additionally, this compound induces concentration-dependent early and late apoptosis in A2780 cells, with late apoptosis being more pronounced.
In vivo	PROTAC Sirt2 Degrader-2 (Compound W10) administered intraperitoneally at 3-10 mg/kg every two days significantly inhibits tumor growth in A2780 tumor-bearing mice without evident toxicity and effectively degrades SIRT2 protein in vivo.

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