Data Sheet (Cat.No.T212564)

TargetMol

EGFR-IN-169

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: 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	EGFR-IN-169 is an epidermal growth factor receptor (EGFR) inhibitor derived from ginsenoside, with an IC50 of 5.19 μM. It disrupts colorectal cancer cell migration and growth by inhibiting the EGFR-mediated RalA/EMT pathway. With an IC50 of 4.46 μM against HCT-116 cells and a selectivity index (SI) of 16.92, EGFR-IN-169 also inhibits CDKs, induces G0/G1 cell cycle arrest, and suppresses cell migration and invasion. Additionally, EGFR-IN-169 reduces mitochondrial membrane potential, induces apoptosis and reactive oxygen species (ROS) production. It is applicable in cancer research, particularly for colorectal cancer.
Targets(IC50)	Apoptosis,EGFR,Bcl-2 Family,CDK,ROS
In vitro	EGFR-IN-169 (Compound 4e) exhibits an IC50 of 4.46 μM in HCT-116 cells, 6.89 μM in CT-26 cells, 9.03 μM in HT-29 cells, 16.01 μM in SW620 cells, and 18.98 μM in Caco-2 cells. At concentrations of 5-10 μM over 48 hours, it suppresses colony formation in HCT-116 and CT-26 cell lines. It induces significant G0/G1 phase arrest in HCT-116 cells at 2.5-10 μM for 48 hours and triggers apoptosis in the same cells at 2.5-10 μM for 24-48 hours. Additionally, EGFR-IN-169 causes mitochondrial damage and reactive oxygen species (ROS) accumulation in HCT-116 cells at 2.5-10 μM over 12 hours. At 5 μM for 48 hours, it inhibits migration and invasion of HCT-116 cells and suppresses RalA protein activation in a dose-dependent manner within these cells.
In vivo	EGFR-IN-169 (Compound 4e) demonstrates good safety at a dose of 100 mg/kg, administered once daily for 7-14 days in mice. Moreover, when given intraperitoneally at a dosage of 5-10 mg/kg, EGFR-IN-169 effectively inhibits tumor growth in the CT-26 tumor-bearing mouse model.

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