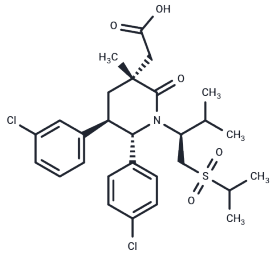
Data Sheet (Cat.No.TQ0127)

TargetMol

Navtemadlin

Chemical Properties



CAS No. : 1352066-68-2

Formula: C28H35Cl2NO5S

Molecular Weight: 568.55

Storage: Powder: -20°C for 3 years
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Navtemadlin (AMG232) is a potent, selective and orally available inhibitor of p53-MDM2 interaction (IC50: 0.6 nM). It binds to MDM2 with a Kd of 0.045 nM.
Targets(IC50)	Mdm2,E1/E2/E3 Enzyme,MDM-2/p53
In vitro	**METHODS**: Navtemadlin (0.1, 1, 10 μM) treated B16-F10 cells to determine whether reactivation of p53 by Navtemadlin would induce tumor growth arrest. **RESULTS** Navtemadlin induced significant p53-dependent growth arrest but minimal apoptosis in B16-F10 cells. [1]
In vivo	**METHODS**: Navtemadlin (AMG232)(20 mg/kg (ip)) was used to treat C57Bl/6 mice bearing B16-F10 melanoma tumors to observe whether it inhibited tumor growth in mice. **RESULTS** When Navtemadlin (AMG232) was administered daily starting from day 3, p53 tumor size was reduced by approximately 30%-50%. [1] **METHODS**: Navtemadlin (AMG232) (10, 25, 75 mg/kg, once daily, orally) was used to observe whether it could inhibit the growth of mouse tumor xenografts. **RESULTS** Navtemadlin (AMG232) activated p53 pathway activity in vivo and effectively inhibited the growth of mouse tumor xenografts. It also blocked DNA synthesis and induced apoptosis in vivo[2].
Cell Research	Cell Line: SJSA-1, HCT116, ACHN, NCI-H460, MOLM-13, RKO, MCF7, 22RV1, HT-29, PC-3, NCI-H82, NCI-SNU1, MG-63, NCI-H2452, SW982, C32, SK-HEP-1, A375, RT4, RPMI2650, MDA-MB-134-VI, NCI-H2347, and A427 cells. Concentration: 0-10 μM [1]. Incubation Time: 72 hours.
Animal Research	Animal Model: Female athymic nude mice (n=10) based cancer models. Dosage: 10, 25, 75 mg/kg. Administration: Once daily by oral gavage [1].

Solubility Information

Solubility	H2O: Insoluble, DMSO: 150 mg/mL (263.83 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: < 10 mg/mL (17.59 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% Corn oil: 10 mg/mL (17.59 mM),Solution. 10% DMSO+90% Saline: 10 mg/mL (17.59 mM),Suspension. 10% DMSO+90% (20% SBE-β-CD in Saline): < 10 mg/mL (17.59 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7589 mL	8.7943 mL	17.5886 mL
5 mM	0.3518 mL	1.7589 mL	3.5177 mL
10 mM	0.1759 mL	0.8794 mL	1.7589 mL
50 mM	0.0352 mL	0.1759 mL	0.3518 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

Ingelshed K, et al. The MDM2 Inhibitor Navtemadlin Arrests Mouse Melanoma Growth In Vivo and Potentiates Radiotherapy. Cancer Res Commun. 2022 Sep 28;2(9):1075-1088.

Canon J, et al. The MDM2 Inhibitor AMG 232 Demonstrates Robust Antitumor Efficacy and Potentiates the Activity of p53-Inducing Cytotoxic Agents. Mol Cancer Ther. 2015 Mar;14(3):649-58.