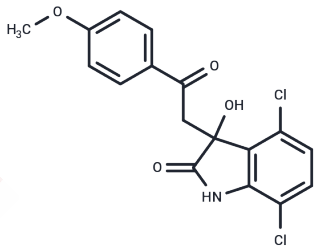
Data Sheet (Cat.No.T2275)

TargetMol

YK-4-279

Chemical Properties



CAS No. : 1037184-44-3

Formula: C17H13Cl2NO4

Molecular Weight: 366.2

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	YK 4-279, an inhibitor of RNA Helicase A (RHA), binds to the oncogenic transciption factor EWS-FLI1.
Targets(IC50)	Apoptosis,DNA/RNA Synthesis
In vitro	In the fusion-positive LNCaP-luc-M mouse tumor model, YK-4-279 effectively inhibits tumor cell proliferation and migration. In the in vivo Ewing's Sarcoma Family of Tumors (ESFT) xenografts, YK-4-279 (1.5 mg/kg i.p.) successfully suppresses growth.
In vivo	In TC32 cells containing EWS-FLI1, YK-4-279 inhibits cell growth by blocking the interaction between EWS-FLI1 and RHA, thereby reducing the level of cyclin D. In ESFT cells, YK-4-279 can suppress cellular proliferation and induce apoptosis. Additionally, in prostate cancer cells positive for fusion, YK-4-279 inhibits the biological activity of ERG and ETV1, leading to decreased cell migration.
Kinase Assay	Cytosolic phosphorylation of Akt: Hela cells are serum starved for 1 hr and treated with IGF (100ng/mL) or SC79 (4 μg/mL) for 30 minutes. Cells are lysed in Lysis buffer containing 250 mM Sucrose, 20 mM HEPES, 10 mM KCl, 1.5 mM MgCl2, 1 mM EDTA, 1 mM EGTA supplemented with protease inhibitors. Cells are passed through 25 g needle several times and kept on ice for 20 minutes. Total cell lysate is taken at this point. Cell lysates are centrifuged at 100,000 g for 30 minutes. Supernatant is collected as the cytosolic fraction. Pellet is washed with lysis buffer and represents the membrane fraction. Total cell lysate, cytosolic and membrane fractions are resolved by SDS-PAGE and analyzed for phospho-Akt (S473), Total Akt, Tubulin (cytosolic marker) and Orai1 (membrane marker) by western blotting.

Solubility Information

Solubility	Ethanol: 48 mg/mL (131.08 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 68 mg/mL (185.69 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: 2 mg/mL (5.46 mM),Sonication is recommended. *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*

In vivo Formulation	*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	2.7307 mL	13.6537 mL	27.3075 mL
5 mM	0.5461 mL	2.7307 mL	5.4615 mL
10 mM	0.2731 mL	1.3654 mL	2.7307 mL
50 mM	0.0546 mL	0.2731 mL	0.5461 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

Erkizan HV, et al. Nat Med. 2009, 15(7), 750-756.
Rahim S, et al. PLoS One. 2011, 6(4), e19343.
Rahim S, et al. PLoS One. 2014, 9(12), e114260.