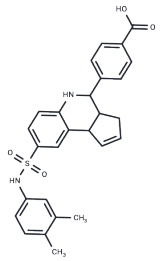
Data Sheet (Cat.No.T3653)

TargetMol

MX69

Chemical Properties



CAS No. : 1005264-47-0

Formula: C27H26N2O4S

Molecular Weight: 474.57

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	MX69 is the MDM2/XIAP inhibitor, blocking the MDM2 protein-XIAP RNA interaction, leading to MDM2 degradation.
Targets(IC50)	Mdm2,E1/E2/E3 Enzyme,IAP
In vitro	MX69 inhibits expression of both MDM2 and XIAP in a time- and dose-dependent manner. MX69 induces ubiquitination of endogenous MDM2 in cancer cells. Downregulation of MDM2 by MX69 is through induction of MDM2 self-ubiquitination and degradation. Half-life of MDM2 in control-treated EU-1 cells is greater than 90 min, whereas MX69 treatment decreases the MDM2 half-life to <30 min. In SK-N-SH cells with stably transfected either wild-type (WT)-MDM2 or mutant MDM2-C464A, Treatment with MX69 significantly inhibits expression and increased the turnover of WT-MDM2 but not MDM2-C464A. MX69 significantly enhances the p53 half-life in WT-MDM2 but not mutant MDM2-C464A-transfected SK-N-SH cells. p53 is stabilized and accumulates in MX69-treated cells. MX69-mediated inhibition of XIAP is MDM2 dependent. Treatment of MX69 activates caspases 3, 7, and 9 as well as the cleavage of the death substrate PARP. MX69 also exhibits a significant cytotoxic effect on both ALL and NB lines(cancer cell lines), particularly those lines with MDM2 overexpression and a WTp53 phenotype. MX69-induced cell death is indeed due to apoptosis. MX69-induced cell apoptosis and death are dependent on MDM2, p53, and XIAP expression. MX69 shows minimal inhibitory effect on normal human bone marrow in vitro[1].
In vivo	MX69 has significant apoptotic and anti-proliferative effects on MDM2-expressing cancer cells in vivo. MX69 is well tolerated in animals due to the fact that normal cells/tissues express little or no MDM2. No evidence of toxicity after treatment with MX69 at the 100 mg/kg dose. MDM2-specific agent MX69 should not activate either on-target (e.g., p53 induction) or off-target signaling pathways in normal cells. Thus, specific MDM2 inhibitors such as MX69 may be excellent candidates for targeted therapy of refractory cancers expressing high levels of MDM2[1].
Cell Research	The cytotoxic effect of leads is determined using the WST assay. Briefly, cells cultured in 96-well microtiter plates are treated with different concentrations of leads for a 20-hr period. WST (25 mg/well) is then added and incubation continued for an additional 4 hr, after which the optical density is read with a microplate reader.(Only for Reference)

Solubility Information

Solubility	DMSO: 88 mg/mL (185.43 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 39 mg/mL (82.18 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1072 mL	10.5359 mL	21.0717 mL
5 mM	0.4214 mL	2.1072 mL	4.2143 mL
10 mM	0.2107 mL	1.0536 mL	2.1072 mL
50 mM	0.0421 mL	0.2107 mL	0.4214 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.

Reference

Gu L, et al. Cancer Cell. 2016, 30(4):623-636.