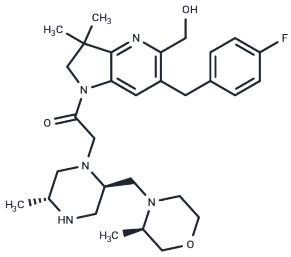
Data Sheet (Cat.No.TQ0029)

TargetMol

ASTX660

Chemical Properties



CAS No. : 1799328-86-1

Formula: C30H42FN5O3

Molecular Weight: 539.68

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	Tolinapant (ASTX660) is an orally bioavailable cIAP1/2 and XIAP antagonist that induces expression of immunogenic cell death (ICD) markers in sensitive HNSCC cell lines in vitro.
Targets(IC50)	Apoptosis,IAP
In vitro	**METHODS**: Four human HNSCC cell lines (3 HPV-, 1 HPV+) were treated with IFN-γ (positive control, 10 ng/mL), TNFα (20 ng/mL), Tolinapant (ASTX660) (500 nM, 1 μM), and ASTX660 (250 nM, 500 nM, 1 μM) + TNFα for 48 hours, and then the intracellular APM components were analyzed by flow cytometry. **RESULTS** In all four cell lines, HLA-A, B, and C expression was consistently increased under ASTX660 + TNFα treatment. ASTX660 + TNFα may enhance tumor cell killing. [1] **METHODS**: DLD1, HCT116, and SW48 were treated with ASTX660 (0.04, 0.2, 1 μM, 24 hours). After washing and cell lysis, western blot analysis was performed using antibodies specific for the indicated proteins. **RESULTS** ASTX660 concentrations as low as 40 nM were sufficient to rapidly reduce cIAP2 (but not cIAP1) levels. [2]
In vivo	**METHODS**: Tolinapant (ASTX660)(16 mg/kg, oral), XRT (single dose 8 Gy), or a combination of both treated a MEER syngeneic tumor xenograft mouse model. Tumors, spleens, and DLNs were harvested and analyzed for CD8 lymphocytes by flow cytometry. Tumor subpopulations were digested and T cells were magnetically selected and cocultured with inactivated dendritic cells presenting p15E peptide. Subsequent IFN-γ production was quantified using an ELISpot assay. **RESULTS** The number of CD8+ T cells in the spleen was significantly increased in animals treated with ASTX660 alone and in the subpopulation of animals treated with radiation ± ASTX660 (Figure 3(b)). In the draining lymph nodes of animals treated with XRT alone There was a significant increase in the number of CD8 T lymphocytes and an almost significant increase in the number of CD8 T lymphocytes in animals that received the combination treatment. [1]

Solubility Information

Solubility	DMSO: 150 mg/mL (277.94 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 (3.71 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 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	1.8529 mL	9.2647 mL	18.5295 mL
5 mM	0.3706 mL	1.8529 mL	3.7059 mL
10 mM	0.1853 mL	0.9265 mL	1.8529 mL
50 mM	0.0371 mL	0.1853 mL	0.3706 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

Ye W, et al. ASTX660, an antagonist of cIAP1/2 and XIAP, increases antigen processing machinery and can enhance radiation-induced immunogenic cell death in preclinical models of head and neck cancer. Oncoimmunology. 2020 Jan 9;9(1):1710398.

Knoll G, et al. The non-peptidomimetic IAP antagonist ASTX660 sensitizes colorectal cancer cells for extrinsic apoptosis. FEBS Open Bio. 2021 Mar;11(3):714-723.