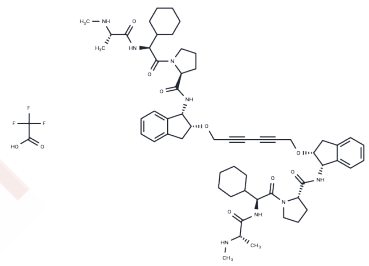
Data Sheet (Cat.No.T14378)

TargetMol

AZD5582

Chemical Properties



CAS No. :	1258392-53-8
Formula:	C58H78N8O8
Molecular Weight:	1015.29
Storage:	Store at low temperature,Keep away from direct sunlight 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	AZD5582 is an inhibitor of IAPs, which binds to the BIR3 domains cIAP1, cIAP2, and XIAP with IC50s of 15, 21, and 15 nM, respectively. It induces apoptosis.
Targets(IC50)	Apoptosis,IAP
In vitro	AZD5582 (20 nM; 48 hours) inhibited cell viability by cooperating with IFNγ or viral double-stranded RNA (dsRNA) in H1975 NSCLC cells[2]. In HCC827 NSCLC cells, AZD5582 (20 nM; 48 hours) induced apoptosis by activating cell death and caspase-3/-8 through co-treatment with IFNγ[2]. Additionally, AZD5582 (20 nM; 17 or 25 hours) down-regulated cIAP-1, activated RIPK1 (an upstream regulator of caspase-8), and initiated both extrinsic (caspase-8) and intrinsic (caspase-9) apoptosis pathways, leading to the cleavage of caspase-3 and caspase-7[2].
In vivo	AZD5582 (intravenous injection; 0.1-3.0 mg/kg; once a week; 2 weeks) induces cIAP1 degradation and caspase 3 cleavage in tumor cells, leading to significant tumor resolution after two weeks. A medium dose (0.5 mg/kg) of AZD5582 degrades cIAP1 but requires additional time to achieve apoptosis-inducing effects[1].

Solubility Information

Solubility	DMSO: 66.25 mg/mL (65.25 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 (1.97 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	0.9849 mL	4.9247 mL	9.8494 mL
5 mM	0.197 mL	0.9849 mL	1.9699 mL
10 mM	0.0985 mL	0.4925 mL	0.9849 mL
50 mM	0.0197 mL	0.0985 mL	0.197 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

Hennessy EJ, et al. Discovery of a novel class of dimeric Smac mimetics as potent IAP antagonists resulting in a clinical candidate for the treatment of cancer (AZD5582). J Med Chem. 2013 Dec 27;56(24):9897-919.
Qin Hao, et al. IF-γ and Smac mimetics synergize to induce apoptosis of lung cancer cells in a TNFα-independent manner,Cancer Cell Int. 2018; 18: 84.