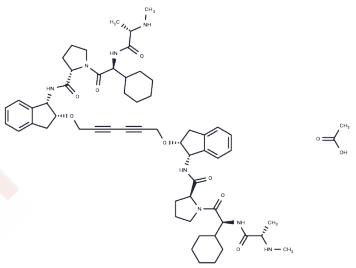
Data Sheet (Cat.No.T14378L)

TargetMol

AZD5582 acetate (1258392-53-8 free base)

Chemical Properties



CAS No. :

Formula: C60H82N8O10

Molecular Weight: 1075.36

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	AZD5582 acetate is an inhibitor of IAPs, which binds to the BIR3 domains cIAP1, cIAP2, and XIAP with IC50s of 15, 21, and 15 nM, respectively. AZD5582 induces apoptosis.
Targets(IC50)	IAP
In vitro	AZD5582 (20 nM; 48 hours) inhibited cell viability by cooperation with IFNγ or viral double-stranded RNA (dsRNA) in H1975 NSCLC cells[2]. AZD5582 (20 nM; 48 hours) involves in apoptosis due to induction of cell death and active caspase-3/ -8 activities by AZD5582 and IFNγ co-treatment in HCC827 NSCLC cells[2]. AZD5582 (20 nM; 17 or 25 hours) down-regulates cIAP-1, activates RIPK1(upstream regulator of caspase-8), and triggers the activation of extrinsic (caspase-8) and intrinsic (caspase-9) apoptosis pathways, causing 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) causes degradation of cIAP1 and caspase 3 cleavage in tumor cells, and after a two-week treatment, the tumors largely resolved. When the mice are given a medium dose (0.5 mg/kg) of AZD5582, cIAP1 degrades after administration, but it takes a while time to reach apoptosis-inducing effect[1].

Solubility Information

Solubility	DMSO: 55 mg/mL (51.15 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.9299 mL	4.6496 mL	9.2992 mL
5 mM	0.186 mL	0.9299 mL	1.8598 mL
10 mM	0.093 mL	0.465 mL	0.9299 mL
50 mM	0.0186 mL	0.093 mL	0.186 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.
Xiong Y, Luo J, Hong Z Y, et al.Hyperactivation of SREBP induces Pannexin-1-dependent lytic cell death.Journal of Lipid Research..2024
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.