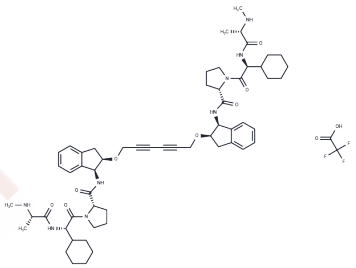
Data Sheet (Cat.No.T36201L)

TargetMol

AZD5582 TFA

Chemical Properties



CAS No. :

Formula: C60H79F3N8O10

Molecular Weight: 1129.31

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 TFA is a potent IAP antagonist that binds to the BIR3 domain of cIAP1, cIAP2, and XIAP with IC50 values of 15, 21, and 15 nM, respectively.AZD5582 TFA induces apoptosis.
Targets(IC50)	Apoptosis,IAP
In vitro	AZD5582 TFA (20 nM; 48 h; H1975 NSCLC cell line) in collaboration with IFNγ or viral double-stranded RNA (dsRNA), suppresses cell viability and even induces cell death in H1975 NSCLC cells.[2] AZD5582 TFA (20 nM; 17 or 25 h) induces cIAP-1 downregulation, promotes RIPK1 activation (an upstream regulator of caspase-8), and initiates the activation of both extrinsic (caspase-8) and intrinsic (caspase-9) apoptotic pathways, resulting in the cleavage of caspase-3 and caspase-7.[2] AZD5582 TFA (20 nM; 48 h; H1975 NSCLC cell line) is involved in apoptosis due to induction of cell death and active caspase-3/8 activities by AZD5582 TFA and IFNγ co-treatment in HCC827 NSCLC cells.[2]
In vivo	AZD5582 TFA (0.1-3.0 mg/kg; i.v.; once a week; 2 weeks; MDA-MB-231 xenograft-bearing mice) triggers cIAP1 degradation and caspase 3 cleavage within tumor cells. Following a two-week treatment, significant tumor resolution is observed. Upon administering a medium dose of 0.5 mg/kg AZD5582 TFA to mice, cIAP1 degradation occurs upon administration, although it takes some time for the apoptosis-inducing effects to manifest.[1]

Solubility Information

Solubility	DMSO: 50 mg/mL (44.27 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.8855 mL	4.4275 mL	8.855 mL
5 mM	0.1771 mL	0.8855 mL	1.771 mL
10 mM	0.0885 mL	0.4427 mL	0.8855 mL
50 mM	0.0177 mL	0.0885 mL	0.1771 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;56(24):9897-9919.
Hao Q, et al. Interferon-γ and Smac mimetics synergize to induce apoptosis of lung cancer cells in a TNFα-independent manner. Cancer Cell Int. 2018;18:84.
Su K, et al. EV-T synergizes with AZD5582 to overcome TRAIL resistance through concomitant suppression of cFLIP, MCL-1, and IAPs in hepatocarcinoma. J Mol Med (Berl). 2022;100(4):629-643.