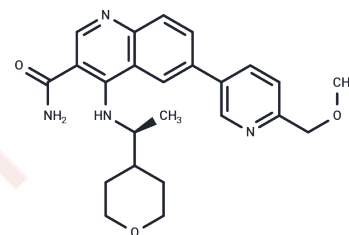


AZ31

Chemical Properties

CAS No. :	2088113-98-6
Formula:	C ₂₄ H ₂₈ N ₄ O ₃
Molecular Weight:	420.5
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	AZ31 is an ATM inhibitor with potency, high selectivity, and oral activity. AZ31 inhibits ATM enzymes, intracellular ATM, with IC ₅₀ values of <1.2 nM and 46 nM, respectively. AZ31 exhibits excellent ATR selectivity, PIKK family selectivity, and pan-kinase selectivity. AZ31 is a potent in vitro radiosensitizer that can be used for cancer research.
Targets(IC ₅₀)	ATM/ATR
In vitro	AZ31 (0.3-3 μM ; 1 h) modulates the phosphorylation of a range of ATM targets.[2] AZ31 (10 μM ; 1 h) influences the stabilization of p53 in H2228 lung cancer cells post-radiation.[2]
In vivo	AZ31 (50-100 mg/kg ; p.o. twice daily) exhibits limited penetration into the brain.[2]

Solubility Information

Solubility	DMSO: 46.67 mg/mL (110.99 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 4.67 mg/mL (11.11 mM), Solution. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3781 mL	11.8906 mL	23.7812 mL
5 mM	0.4756 mL	2.3781 mL	4.7562 mL
10 mM	0.2378 mL	1.1891 mL	2.3781 mL
50 mM	0.0476 mL	0.2378 mL	0.4756 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

Kiesel BF, et al. LC-MS/MS assay for the simultaneous quantitation of the ATM inhibitor AZ31 and the ATR inhibitor AZD6738 in mouse plasma. *J Pharm Biomed Anal.* 2017 ; 138:158-165.

Karlin J, et al. Orally Bioavailable and Blood-Brain Barrier-Penetrating ATM Inhibitor (AZ32) Radiosensitizes Intracranial Gliomas in Mice. *Mol Cancer Ther.* 2018 ; 17(8):1637-1647.

Iglesias C, et al. Fracture bone healing and biodegradation of AZ31 implant in rats. *Biomed Mater.* 2015 ; 10(2): 025008.

Song Y, et al. In vitro and in vivo assessment of biocompatibility of AZ31 alloy as biliary stents: a preclinical approach. *Arch Med Sci.* 2020 ; 18(1):195-205.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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