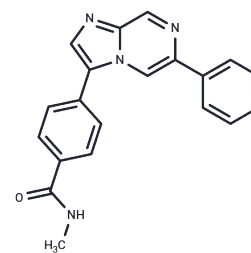


## AZ32

## Chemical Properties

CAS No. :	2288709-96-4
Formula:	C <sub>20</sub> H <sub>16</sub> N <sub>4</sub> O
Molecular Weight:	328.37
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	AZ32 is an orally bioavailable, blood-brain barrier-penetrating ATM inhibitor with an IC <sub>50</sub> of <6.2 nM for the ATM enzyme and an IC <sub>50</sub> of 0.31 μM for ATM in cells.
Targets(IC <sub>50</sub> )	ATM/ATR
In vitro	AZ32 is an enhanced blood-brain barrier (BBB)-penetrating ATM inhibitor. AZ32 blocks the DNA damage response and radiosensitized GBM cells in vitro[1].
In vivo	AZ32 exhibits superior blood-brain barrier (BBB) penetration and is more effective as a radiosensitizer in both syngeneic and human orthotopic mouse glioma models compared to AZ31. It acts as a specific inhibitor of the ATM kinase, showcasing commendable BBB penetration in mice. A single oral dose of AZ32 (200 mg/kg) maintains free-brain concentrations above the cellular IC <sub>50</sub> for around 22 hours [1].

## Solubility Information

Solubility	DMSO: 55 mg/mL (167.49 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 (6.09 mM),Sonication is recommended. <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

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	1mg	5mg	10mg
1 mM	3.0453 mL	15.2267 mL	30.4535 mL
5 mM	0.6091 mL	3.0453 mL	6.0907 mL
10 mM	0.3045 mL	1.5227 mL	3.0453 mL
50 mM	0.0609 mL	0.3045 mL	0.6091 mL

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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

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

Liu K, Li Y C, Chen Y, et al. AZ32 reverses ABCG2-mediated multidrug resistance in colorectal cancer. *Frontiers in Oncology.* 2021, 11: 1764.

Liu K, Li Y C, Chen Y, et al. AZ32 reverses ABCG2-mediated multidrug resistance in colorectal cancer[J]. *Frontiers in Oncology.* 2021, 11: 1764.

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