

Z4P

## Chemical Properties

CAS No. : 2361760-87-2

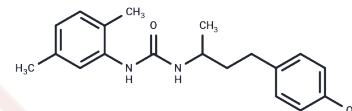
Formula: C<sub>19</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub>

Molecular Weight: 312.41

Store at low temperature

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	Z4P, an IRE1 inhibitor with blood-brain barrier permeability (BBB) (IC <sub>50</sub> =1.13 μM), inhibits glioblastoma growth and recurrence in combination with Temozolomide.
Targets(IC <sub>50</sub> )	IRE1
In vitro	Z4P inhibits IRE1α RNase activity in GBM cells (U87, RADH87, U251, UTMZ), reducing XBP1s and SPARC expression and showing dose-dependent antiproliferative effects. At 25 μM (48h), Z4P significantly suppresses GBM cell viability and enhances the efficacy of TMZ[1].
In vivo	Z4P crosses the BBB and, at 300 μg/kg i.p. daily for 28 days, significantly reduces tumor size in GBM xenograft mice. Combined with TMZ, Z4P causes near-complete tumor regression with no evident toxicity[1].

## Solubility Information

Solubility	DMSO: 80 mg/mL (256.07 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (10.56 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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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	3.2009 mL	16.0046 mL	32.0092 mL
5 mM	0.6402 mL	3.2009 mL	6.4018 mL
10 mM	0.3201 mL	1.6005 mL	3.2009 mL
50 mM	0.064 mL	0.3201 mL	0.6402 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

Pelizzari-Raymundo D, et al. A novel IRE1 kinase inhibitor for adjuvant glioblastoma treatment. *iScience*. 2023 Apr 24;26(5):106687.

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