Product Datasheet

Technical Data

Formula	$C_{29}H_{35}N_2O_2P{\cdot}Cl$					
Molecular Weight	510.03	**CAS No.**	1334850-99-5			
Solubility (25°C)*	In vitro	DMSO	100 mg/mL (196.06 mM)			
		Water	100 mg/mL (196.06 mM)			
		Ethanol	100 mg/mL (196.06 mM)			
	In vivo (Add solvents to the product individually and in order)	Oral Administration	Homogeneous suspension	CMC-NA	≥5mg/ml	Taking the 1 mL working solution as an example, add 5 mg of this product to 1 ml of CMC-Na solution, mix evenly to obtain a homogeneous suspension with a final concentration of 5 mg/ml.

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Concentration \ Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.9607 mL	9.8033 mL	19.6067 mL
5 mM	0.3921 mL	1.9607 mL	3.9213 mL
10 mM	0.1961 mL	0.9803 mL	1.9607 mL
50 mM	0.0392 mL	0.1961 mL	0.3921 mL

Biological Activity

Description	Mito-TEMPO (MT), a mitochondria-targeted superoxide dismutase mimetic, protects against the early phase of acetaminophen (APAP) hepatotoxicity by inhibiting peroxynitrite formation. Mito-TEMPO treatment inhibits APAP-induced **RIP3 kinase** expression.
Targets	RIP3 kinase [1]
In vitro	Mito-TEMPO improves blastocyst development by superoxide reduction in porcine embryos in vitro.[2]
In vivo	Mito-Tempo (MT) treatment inhibits APAP-induced RIP3 kinase expression, and RIP3-deficient mice shows caspase activation and apoptotic morphology in hepatocytes analogous to this compound.[1]

Protocol (from reference)

Cell Assay:[2]

- **Cell lines**
  Porcine embryos
- **Concentrations**
  0.1 μM
- **Incubation Time**
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- **Method**
  Embryos are cultured in 50 μl drops porcine zygote medium-3 (PZM-3) with 3 mg/ml BSA at 38.5 °C under 5% CO2. After culturing 48 hours, cleaved embryos are transferred to 50 μl drop of fresh PZM-3 medium and cultured for 4 days. Blastocyst formation is evaluated after 6 days of culture. This compound (0.1 μM) is added to the culture medium during the IVC periods.

Animal Study:[1]

- **Animal Models**
  8-12 week-old male C57BL/6J mice
- **Dosages**
  20 mg/kg
- **Administration**
  IP

References

https://pubmed.ncbi.nlm.nih.gov/30324313/ https://pubmed.ncbi.nlm.nih.gov/29973637/

RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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