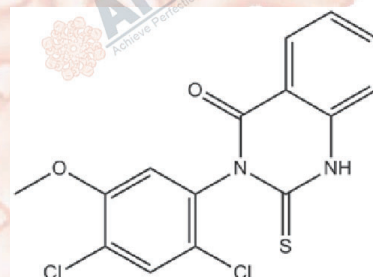


Product Data Sheet

Mdivi 1

Cat. No.:	A4472
CAS No.:	338967-87-6
Formula:	C ₁₅ H ₁₀ Cl ₂ N ₂ O ₂ S
M.Wt:	353.22
Synonyms:	
Target:	Apoptosis
Pathway:	Other Apoptosis
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; insoluble in EtOH; ≥17.65 mg/mL in DMSO

In Vitro	Preparing Stock Solutions	Mass			
		Solvent	1mg	5mg	10mg
		Concentration			
		1 mM	2.8311 mL	14.1555 mL	28.3110 mL
		5 mM	0.5662 mL	2.8311 mL	5.6622 mL
		10 mM	0.2831 mL	1.4155 mL	2.8311 mL

Please refer to the solubility information to select the appropriate solvent

Biological Activity

Shortsummary	Selective DRP1/Dnm1 inhibitor, cell-permeable	
IC ₅₀ & Target	(DRP1), 1 - 10 μM (Dnm1)	
In Vitro	Cell Viability Assay	
	Cell Line:	Yeast cells harboring the temperature-sensitive fzo1-1 allele
	Preparation method:	The solubility of this compound in DMSO is >17.7mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
	Reacting conditions:	50 μM

	Applications:	Mdivi-1 (50 μ M) inhibited mitochondrial division in mammalian cells (COS cells) by attenuating Drp1 self-assembly. Mdivi-1 (50 μ M) attenuated mammalian mitochondrial division and Drp1 self-assembly during apoptosis. Mdivi-1 significantly inhibited STS-induced annexin V staining of non-necrotic cells as assessed by FACS analysis, indicating that mdivi-1 inhibited apoptosis.
In Vivo	Animal experiment	
	Animal models:	C57BL/6 mice
	Dosage form:	Intraperitoneal injection, 50 mg/kg, 60 minutes
	Applications:	Mdivi-1 treatment significantly increased RGC survival by approximately 54% in the central, 58% in the middle, and 48% in the peripheral areas. Mdivi-1 treatment significantly decreased GFAP protein expression in ischemic retina at 12 hours. Mdivi-1 treatment did not change mean arterial blood pressure, body weight, animal appearance or behavior.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Chien L, Liang MZ, et al. "Mitochondrial therapy promotes regeneration of injured hippocampal neurons." *Biochim Biophys Acta*. 2018 Jun 15.pii: S0925-4439(18)30216-3.PMID:29913215

See more customer validations on www.apexbt.com.

References

- [1]. Cassidy-Stone A, Chipuk J E, Ingeman E, et al. Chemical inhibition of the mitochondrial division dynamin reveals its role in Bax/Bak-dependent mitochondrial outer membrane permeabilization[J]. *Developmental cell*, 2008, 14(2): 193-204.
- [2]. Park S W, Kim K Y, Lindsey J D, et al. A selective inhibitor of drp1, mdivi-1, increases retinal ganglion cell survival in acute ischemic mouse retina[J]. *Investigative ophthalmology & visual science*, 2011, 52(5): 2837-2843.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



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