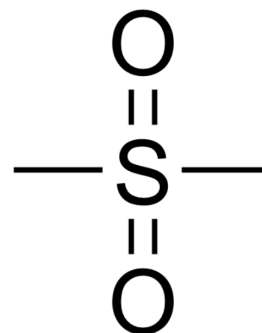


Dimethyl sulfone

Cat. No.:	HY-Y1314		
CAS No.:	67-71-0		
Molecular Formula:	C ₂ H ₆ O ₂ S		
Molecular Weight:	94.13		
Target:	Endogenous Metabolite		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

H₂O : 50 mg/mL (531.18 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	10.6236 mL	53.1180 mL	106.2361 mL
	5 mM	2.1247 mL	10.6236 mL	21.2472 mL
	10 mM	1.0624 mL	5.3118 mL	10.6236 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Dimethyl sulfone (Methyl Sulfonyl Methane) is a metabolic product of endogenous methanethiol metabolism and intestinal bacterial metabolism. Dimethyl sulfone inhibits choriocapillary endothelial (CCE) cell proliferation, also has many biological effects, including antiinflammatory, antioxidant, and local anesthetic effects that could be neuroprotective^{[1][2][3]}.

IC₅₀ & Target

Microbial Metabolite	Human Endogenous Metabolite	Microbial Metabolite	Human Endogenous Metabolite
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In Vitro

Dimethyl sulfone (25 mM/mL for 15.5 µL/mL; 24 h) inhibits the proliferation of cultured bovine choriocapillary endothelial (CCE) cells^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Dimethyl sulfone (for 0, 0.01, 0.03, 0.1, 0.3 and 1.0 mL; i.p.; single dose) shows neuroprotective effect with significant infarction volume reduction in ischemia rats^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Cardiovasc Transl Res. 2021 Jun 1.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Drugs and Lactation Database (LactMed) [Internet]. Bethesda (MD): National Library of Medicine (US); 2006-. Dimethyl Sulfone. 2022 Mar 21.
- [2]. Eter N, et al. DMSO mimics inhibitory effect of thalidomide on choriocapillary endothelial cell proliferation in culture. Br J Ophthalmol. 2002 Nov;86(11):1303-5.
- [3]. Shimizu S, et al. Dimethylsulfoxide (DMSO) treatment reduces infarction volume after permanent focal cerebral ischemia in rats. Neurosci Lett. 1997 Dec 19;239(2-3):125-7.
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Caution: Product has not been fully validated for medical applications. For research use only.

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