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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

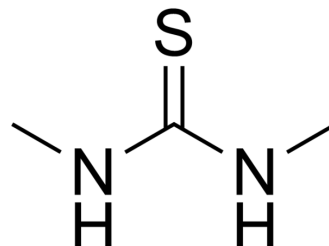
mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

N,N'-Dimethylthiourea

Cat. No.:	HY-W027951
CAS No.:	534-13-4
Molecular Formula:	C ₃ H ₈ N ₂ S
Molecular Weight:	104.17
Target:	Reactive Oxygen Species
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (959.97 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	9.5997 mL	47.9985 mL	95.9969 mL
				5 mM	1.9199 mL	9.5997 mL	19.1994 mL
				10 mM	0.9600 mL	4.7998 mL	9.5997 mL
Please refer to the solubility information to select the appropriate solvent.							
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (24.00 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (24.00 mM); Clear solution						
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (24.00 mM); Clear solution						

BIOLOGICAL ACTIVITY

Description	N,N'-Dimethylthiourea (DMTU), isolated from <i>Allium sativum</i> , is an orally active scavenger of hydroxyl radical (•OH) and blocks •OH production by activated neutrophils in vitro. N,N'-Dimethylthiourea protects against water-immersion restraint stress (WIRS)-induced gastric mucosal lesions in rats by exerting its antioxidant action including •OH scavenging and anti-inflammatory action ^{[1][2]} .
In Vivo	N,N'-Dimethylthiourea (DMTU; 1, 2.5, or 5 mmol/kg; orally) administered at 0.5 h before the onset of WIRS reduces the severity of gastric mucosal lesions with attenuation of the changes in the levels of gastric mucosal MPO, pro-inflammatory cytokines, LPO, NOx, nonprotein SH, and vitamin C and gastric adherent mucus found at 3 h after the onset of WIRS in a dose-dependent manner in Male Wistar rats aged 6 weeks ^[1] .

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

REFERENCES

- [1]. Yoshiji Ohta, et al. Protective effect of N,N'-dimethylthiourea against stress-induced gastric mucosal lesions in rats. *Fundam Clin Pharmacol.* 2017 Jun;31(3):319-328.
- [2]. Zhongyi Zhang, et al. Analysis of volatile compounds in fermented black garlic by GC-MS.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA