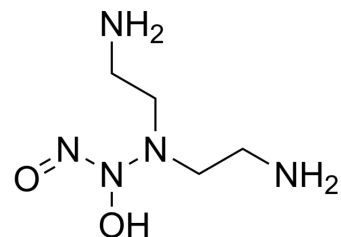


## DETA NONOate

Cat. No.:	HY-136278	
CAS No.:	146724-94-9	
Molecular Formula:	C <sub>4</sub> H <sub>13</sub> N <sub>3</sub> O <sub>2</sub>	
Molecular Weight:	163	
Target:	NO Synthase	
Pathway:	Immunology/Inflammation	
Storage:	Powder	-20°C 3 years
	In solvent	-80°C 6 months
		-20°C 1 month



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 50 mg/mL (306.75 mM; ultrasonic and adjust pH to 9 with H<sub>2</sub>O)  
 DMSO : < 1 mg/mL (ultrasonic) (insoluble or slightly soluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	6.1350 mL	30.6748 mL	61.3497 mL
	5 mM	1.2270 mL	6.1350 mL	12.2699 mL
	10 mM	0.6135 mL	3.0675 mL	6.1350 mL

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

### BIOLOGICAL ACTIVITY

#### Description

DETA NONOate (NOC 18) is an exogenous nitric oxide (NO) donor. DETA NONOate shows a slow release normal amounts of NO and long-acting<sup>[1][2]</sup>.

#### In Vitro

DETA NONOate (100 μM; 16 h) induces growth in an Mycobacterium abscessus complex (MABC) R morphotype by reduced glycopeptidolipid (GPL) expression of M. abscessus subspecies abscessus (Mab)<sup>[3]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

DETA NONOate (15-150 μg/rat, i.c.v., once) exhibits a nociceptive effect in the rat formalin model<sup>[2]</sup>.  
 DETA NONOate (1 μM) reduces ischemia- or ischemia/reperfusion-induced injury to cardiac mitochondria and prevents apoptotic cell death<sup>[4]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Sprague-Dawley rats (Sixty-two, male, 200-250 g) <sup>[2]</sup>
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Dosage:	15 or 150 µg per rat
Administration:	i.c.v., once
Result:	Accelerated the nociception in a dose-dependent manner, and this acceleration was completely abolished by <a href="#">Methylene Blue</a> (HY-14536).

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## REFERENCES

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- [1]. Nandanwar N, et al. Growth medium and nitric oxide alter Mycobacterium abscessus morphotype and virulence. Microbiol Res. 2021 Dec;253:126887.
- [2]. Umbrasas D, et al. Nitric Oxide Donor NOC-18-Induced Changes of Mitochondrial Phosphoproteome in Rat Cardiac Ischemia Model. Medicina (Kaunas). 2019 Sep 24;55(10):631.
- [3]. Soichiro Sonoda, et al. Exogenous nitric oxide stimulates the odontogenic differentiation of rat dental pulp stem cells. Sci Rep. 2018 Feb 21;8(1):3419.
- [4]. S Shibuta, et al. A new nitric oxide donor, NOC-18, exhibits a nociceptive effect in the rat formalin model. EJ Neurol Sci. 1996 Sep 15;141(1-2):1-5
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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](mailto:tech@MedChemExpress.com)

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