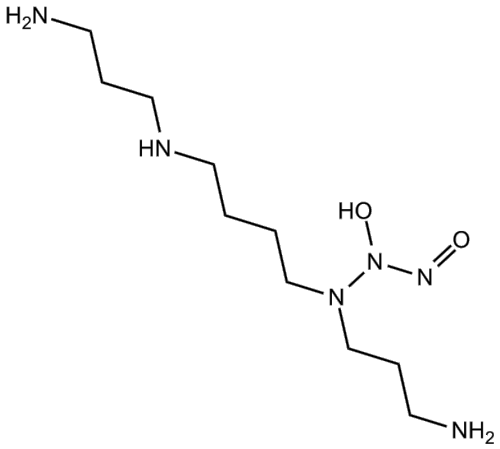
Product Data Sheet

Product Name: Spermine NONOate
Cat. No.: GC13694

Chemical Properties

Cas. No.	136587-13-8		
Chemical Name	N'-(3-aminopropyl)-N'-(4-((3-aminopropyl)amino)butyl)-N-hydroxynitrous hydrazide		
SMILES	ON(N=O)N(CCCN)CCCCNCCCN		
Formula	$C_{10}H_{26}N_6O_2$	M.Wt	262.35
Solubility	aqueous buffers: >100 mg/ml (per Rao)	Storage	Store at -80°C,protect from light
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

Spermine NONOate is a diazeniumdiolate nitric oxide donor [1].

Nitric oxide (NO) increases intracellular guanosine 3' 5' cyclic monophosphate and activates guanylate cyclase, which then cause relaxation of vascular smooth muscle [1].

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Spermine NONOate is a diazeniumdiolate nitric oxide donor. In rat pulmonary artery rings, spermine NONOate (100 μM) increased guanosine 3'5' cyclic monophosphate (cyclic GMP) by 35 fold and caused cyclic GMP-independent relaxation by activation of sarco-endoplasmic reticulum Ca2+-ATPase, Na+/K+-ATPase and calcium-activated potassium channels [1]. Spermine NONOate inhibited human low-density lipoprotein (LDL) oxidation induced by the copper(II) sulfate [2].

In rats with bilateral uterine horn injury, spermine NONOate (1 mg) inhibited the formation of adhesions. Also, The N,O-carboxymethylchitosan (NOCC) plus spermine NONOate group had a lower severity score and extent score than the spermine NONOate group. These results suggested that spermine NONOate reduced the postoperative adhesions [3].

References:

[1]. Homer KL, Wanstall JC. Cyclic GMP-independent relaxation of rat pulmonary artery by spermine NONOate, a diazeniumdiolate nitric oxide donor. Br J Pharmacol, 2000, 131(4): 673-682.
[2]. Goss SP, Hogg N, Kalyanaraman B. The antioxidant effect of spermine NONOate in human low-density lipoprotein. Chem Res Toxicol, 1995, 8(5): 800-806.
[3]. Duran B, Ak D, Cetin A, et al. Reduction of postoperative adhesions by N,O-carboxymethylchitosan and spermine NONOate in rats. Exp Anim, 2003, 52(4): 267-272.

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA