

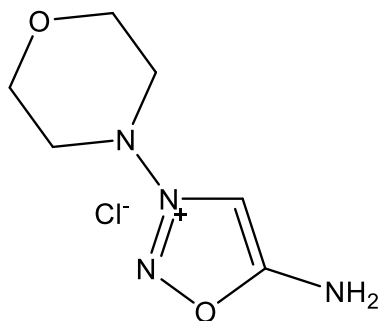
Catalog # 10-1547

SIN-1

CAS# 16142-27-1

Amino-3-morpholinyl-1,2,3-oxadiazolium chloride; 3-Morpholinylsydnimine chloride

Lot # S105111



A metabolite of molsidomine¹ which spontaneously releases nitric oxide and superoxide anion which react to form peroxynitrite under physiological conditions.² The presence of HEPES leads to the formation of hydrogen peroxide and while its absence leads to the formation of peroxynitrite.³ Inhibits platelet aggregation.⁴ Inhibits aggregation and toxicity of amyloid- β in cellular assays.⁵

- 1) Nishikawa *et al.* (1982) Inhibition of platelet aggregation and stimulation of guanylate cyclase by an antianginal agent molsidomine and its metabolites; *J. Pharmacol. Exp. Ther.* **220** 183
- 2) Hogg *et al.* (1992) Production of hydroxyl radicals from the simultaneous generation of superoxide and nitric oxide; *Biochem. J.* **281** 419
- 3) Kirsch *et al.* (1998) Hydrogen peroxide formation by reaction of peroxynitrite with HEPES and related tertiary amines. Implications for a general mechanism. *J. Biol. Chem.* **273** 12716
- 4) Priora *et al.* (2011) *In vitro* inhibition of human and rat platelets by NO donors nitrosoglutathione sodium nitroprusside and SIN-1 through activation of cGMP independent pathways; *Pharmacol. Res.* **64** 289
- 5) Ren *et al.* (2017) Identification of a New Function of Cardiovascular Disease Drug 3-Morpholinylsydnimine Hydrochloride as an Amyloid- β Aggregation Inhibitor; *ACS Omega.* **2** 243

PHYSICAL DATA

Molecular Weight:	206.63
Molecular Formula:	C ₆ H ₁₁ ClN ₄ O ₂
Purity:	>98%
	NMR: (Conforms)
Solubility:	DMSO (35 mg/ml); or Water (65 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions should be freshly prepared. Do not store solutions.

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