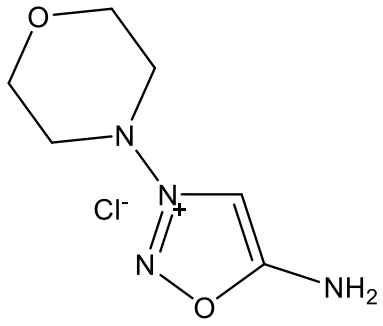
**Catalog # 10-1547**

**SIN-1**

CAS# 16142-27-1

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

Lot # S105111




A metabolite of molsidomine[1] 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-Morpholinosydnonimine Hydrochloride as an Amyloid-β Aggregation Inhibitor;* ACS Omega. **2** 243


## PHYSICAL DATA

| | |
|---|---|
| Molecular Weight: | 206.63 |
| Molecular Formula: | $C_6H_{11}ClN_4O_2$ |
| 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 -20ºC for up to 1 year from the date of purchase. Solutions should be freshly prepared. Do not store solutions. |

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