

**Product Name:** SIN-1 chloride

**Catalog No.:** 0756

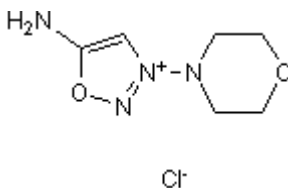
**Batch No.:** 8

CAS Number: 16142-27-1

IUPAC Name: Amino-3-morpholinyl-1,2,3-oxadiazolium chloride

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>6</sub>H<sub>11</sub>ClN<sub>4</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 206.63  
**Physical Appearance:** White solid  
**Solubility:** water to 100 mM  
 DMSO to 100 mM  
**Storage:** Desiccate at +4°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:** R<sub>f</sub> = 0.12 (Dichloromethane:Ethyl acetate [98:2])  
**HPLC:** Shows 100% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	34.88	5.37	27.11
Found	34.52	5.42	26.86

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**Description:**

This compound (the active product of the prodrug SIN-10, molsidomine) acts as a vasodilator and inhibitor of platelet aggregation; longer acting than nitroprusside or nitroglycerin. Decreases myocardial necrosis and reperfusion-induced endothelial dysfunction in models of myocardial ischemia-reperfusion.

**Physical and Chemical Properties:**

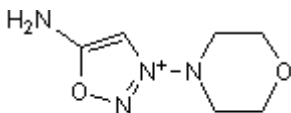
Batch Molecular Formula: C<sub>6</sub>H<sub>11</sub>ClN<sub>4</sub>O<sub>2</sub>

Batch Molecular Weight: 206.63

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



Cl<sup>-</sup>

**Storage:** Desiccate at +4°C

**Solubility & Usage Info:**

water to 100 mM

DMSO to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Tanayama et al** (1974) Biotransformation of molsidomine (SIN-10), a new anti-anginal agent in rats. *Xenobiotica* **4** 175.

**Nishikawa et al** (1982) Inhibition of platelet aggregation and stimulation of guanylate cyclase by an anti-anginal agent molsidomine and its metabolite. *J.Pharmacol.Exp.Ther.* **220** 183. PMID: 6118429.

**Maurice and Heslam** (1990) Molecular basis of the synergistic inhibition of platelet function by nitrovasodilators and activators of adenylate cyclase: inhibition of cyclic AMP breakdown by cyclic GMP. *Mol.Pharmacol.* **37** 671. PMID: 2160060.

**Siegfried et al** (1992) Cardioprotection and attenuation of endothelial dysfunction by organic nitric oxide donors in myocardial ischemia-reperfusion. *J.Pharmacol.Exp.Ther.* **260** 668. PMID: 1738117.

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