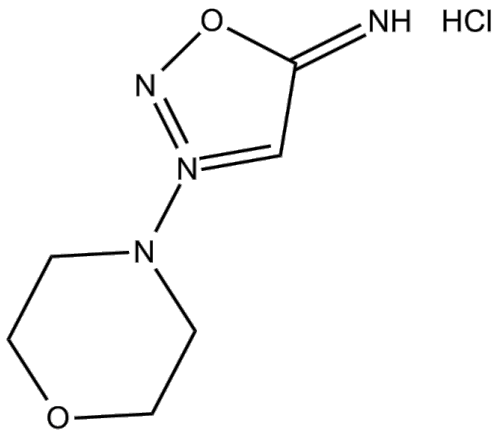
Product Data Sheet

Product Name: SIN-1 chloride
Cat. No.: GC13152

Chemical Properties

Cas. No.	16142-27-1		
Chemical Name	5-imino-3-morpholino-5H-1,2,3-oxadiazol-3-ium-2-ide hydrochloride		
SMILES	N=C1C=N(N2CCOCC2)=NO1.Cl		
Formula	$C_6H_{11}ClN_4O_2$	M.Wt	206.63
Solubility	>9 mg/ml in DMSO, >5 mg/ml in DMF, >8 mg/ml in Ethanol	Storage	Store at -20°C
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

As the active metabolite of molsidomine, SIN-1 (chloride) is a potent vasorelaxant and inhibitor of platelet aggregation. It produces both NO and superoxide and can therefore be used to generate peroxynitrite under physiological conditions.

SIN-1 (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the

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SIN-1 (chloride) inan organic solvent. SIN-1 (chloride) is soluble in organic solvents such as cthanol, DMSO, and dimethyl formamidc. Thesolubility of SIN-1 (chloride) in these solvents is approximately 5 mg/ml.

Further dilutions of the stock solution into aqucous buffers or isotonic saline should be made prior to performingbiological experimcnts. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may havcephysiological effects at low concentrations. Organic solvent-free aqucous solutions of SIN-1 (chloride) can be preparedby directly dissolving the crystalline compound in aqucous buffers. The solubility of SIN-1 (chloridc) in PBS (pH 7.2) isapproximately 10 mg/ml. We do not recommend storing the aqucous solution for more than one day.

As the active mctabolite of molsidominc, SIN-1 (chloride) is a potent vasorelaxant and inhibitor of platelet aggrcgationIt produces both NO and superoxide and can therefore be used to gencrate peroxynitrite under physiological conditions.[1-3]

WARNING This product is not for human or veterinary use.

References:

1.Rosenkranz, B, Winkelmann, B.R., and Parnham, M.J. Clinical pharmacokinctics of molsidomine. Clin. Pharmokinet.30,372-384(1996).

2.Lomonosova, E.E, Kirsch, M, Rauen, U, et al. The critical role of hepes in SIN-1 cytotoxicity, peroxynitrite versus2.hydrogen peroxidc. Free Radic. Biol Med. 24, 522-528 (1998).

3.Nishikawa, M., Kanamori, M., and Hidaka, H. Inhibition of platelet aggregation and stimulation of guanylate cyclascby an antianginal agent molsidomine and its metabolites. J. Pharmacol. Exp. Ther. 220, 183-190 (1982).