

Product Data Sheet

Product Name: N-hydroxylamine Dapsone

Cat. No.: GC52007

Chemical Properties

Cas. No. 32695-27-5

SMILES O=S(C1=CC=C(C=C1)N)(C2=CC=C(C(=O)N)C=C2)=O

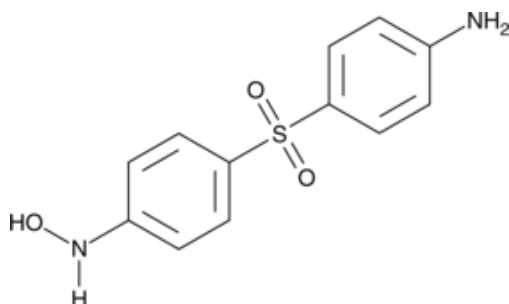
Formula C₁₂H₁₂N₂O₃S M.Wt 264.3

Solubility DMSO: soluble Storage -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

N-hydroxylamine Dapsone is an active metabolite of dapsone.¹ It is formed via N-hydroxylation of dapsone by the cytochrome P450 (CYP) isoforms CYP2C8, CYP2C9, CYP2C18, and CYP2C19 in the liver.² N-hydroxylamine Dapsone is cytotoxic to rat hepatocytes (LC₅₀ = 3.6 mM).³ It induces hemolysis in isolated human erythrocytes at a concentration of 100 µM.¹ N-hydroxylamine Dapsone induces phosphatidylserine (PS) exposure on the outer membrane, a marker of apoptosis and platelet activation, and increases the production of reactive oxygen species (ROS) in a concentration-dependent manner in isolated human erythrocytes. It increases thrombus weight in a rat model of surgically induced thrombosis when administered at a single dose of 50 mg/kg or at a dose of 10 mg/kg per day for four days.

Caution: Product has not been fully validated for medical applications. For research use only.

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1. Bian, Y., Kim, K., An, G.-J., et al. Dapsone hydroxylamine, an active metabolite of dapsone, can promote the procoagulant activity of red blood cells and thrombosis. *Toxicol. Sci.* 172(2):435-444 (2019)
2. Winter, H.R., Wang, Y., and Unadkat, J.D. CYP2C8/9 mediate dapsone N-hydroxylation at clinical concentrations of dapsone. *Drug Metab. Dispos.* 28(8):865-868 (2000)
3. Veggi, L.M., Pretto, L., Ochoa, E.J., et al. Dapsone induces oxidative stress and impairs antioxidant defenses in rat liver. *Life Sci.* 83(5-6):155-163 (2008)

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