

Certificate of Analysis

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Product Name: NSC 95397

Catalog No.: 1547

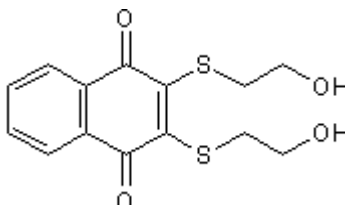
Batch No.: 3

CAS Number: 93718-83-3

IUPAC Name: 2,3-bis[(2-Hydroxyethyl)thiol]-1,4-naphthoquinone

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₁₄O₄S₂
Batch Molecular Weight: 310.38
Physical Appearance: Orange crystalline solid
Solubility: DMSO to 50 mM
 ethanol to 5 mM
Storage: Desiccate at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.45 (Ethyl acetate)
Melting Point: Between 119 - 121°C
HPLC: Shows >99.7% purity
¹H NMR: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	54.18	4.55	
Found	54.17	4.5	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Potent and selective irreversible inhibitor of Cdc25 dual specificity phosphatases (K_i values are 32, 96 and 40 nM for inhibition of Cdc25A, -B and -C respectively). Displays 125 - 180-fold selectivity over VH1-related dual-specificity phosphatase and protein tyrosine phosphatase 1b. Inhibits carcinoma cell growth and blocks G₂/M phase transition in vitro.

Physical and Chemical Properties:

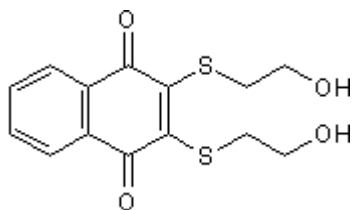
Batch Molecular Formula: C₁₄H₁₄O₄S₂

Batch Molecular Weight: 310.38

Physical Appearance: Orange crystalline solid

Minimum Purity: >97%

Batch Molecular Structure:



Storage: Desiccate at -20°C

Solubility & Usage Info:

DMSO to 50 mM

ethanol to 5 mM

CAUTION - Analysis has shown that this product is liable to decompose when stored at room temperature. Therefore, as a precautionary measure we recommend that the solid material be stored at -20°C, and that solutions, once made up, are stored frozen and used within one week.

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:

Lazo et al (2002) Identification of a potent and selective pharmacophore for Cdc25 dual specificity phosphatase inhibitors. *Mol.Pharmacol.* **61** 720. PMID: 11901209.

Han et al (2004) NAD(P)H:Quinone oxidoreductase-1-dependent and -independent cytotoxicity of potent quinone Cdc25 phosphatase inhibitors. *J.Pharmacol.Exp.Ther.* **309** 64. PMID: 14718602.

Melchheier et al (2005) Quinone-induced Cdc25A inhibition causes ERK-dependent connexin phosphorylation. *Biochem.Biophys.Res.Commun.* **327** 1016. PMID: 15652497.

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