

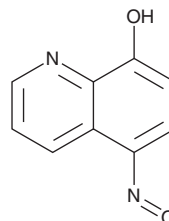
# PRODUCT INFORMATION



## 5-Nitroso-8-quinolinol

Item No. 13856

**CAS Registry No.:** 3565-26-2  
**Formal Name:** 8-hydroxy-5-nitrosoquinoline  
**Synonyms:** Hydron III, NSC 3852  
**MF:** C<sub>9</sub>H<sub>6</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 174.2  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 219, 281, 330 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

5-Nitroso-8-quinolinol is supplied as a crystalline solid. A stock solution may be made by dissolving the 5-nitroso-8-quinolinol in the solvent of choice, which should be purged with an inert gas. 5-Nitroso-8-quinolinol is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 5-nitroso-8-quinolinol in these solvents is approximately 2 and 1 mg/ml, respectively.

5-Nitroso-8-quinolinol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 5-nitroso-8-quinolinol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 5-Nitroso-8-quinolinol has a solubility of approximately 0.2 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

5-Nitroso-8-quinolinol is a chemically unique HDAC inhibitor that harbors a different Zn<sup>2+</sup> chelation motif compared to SAHA.<sup>1,2</sup> As an antitumor agent, 10 μM 5-nitroso-8-quinolinol can induce oxidative stress contributing to apoptosis and differentiation in MCF-7 breast cancer cells.<sup>1,2</sup> Additionally, 5-nitroso-8-quinolinol inhibits *T. gondii* tachyzoite propagation in human fibroblasts with an EC<sub>50</sub> value of 80 nM and inhibits *P. falciparum* growth in human red blood cells with an EC<sub>50</sub> value of 1.3 μM.<sup>3</sup>

### References

1. Martirosyan, A.R., Rahim-Bata, R., Freeman, A.B., *et al.* Differentiation-inducing quinolines as experimental breast cancer agents in the MCF-7 human breast cancer cell model. *Biochem. Pharmacol.* **68(9)**, 1729-1738 (2004).
2. Martirosyan, A., Leonard, S., Shi, X., *et al.* Actions of a histone deacetylase inhibitor NSC3852 (5-nitroso-8-quinolinol) link reactive oxygen species to cell differentiation and apoptosis in MCF-7 human mammary tumor cells. *J. Pharmacol. Exp. Ther.* **317(2)**, 546-552 (2006).
3. Strobl, J.S., Seibert, C.W., Li, Y., *et al.* Inhibition of *Toxoplasma gondii* and *Plasmodium falciparum* infections *in vitro* by NSC3852, a redox active antiproliferative and tumor cell differentiation agent. *J. Parasitol.* **95(1)**, 215-223 (2009).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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