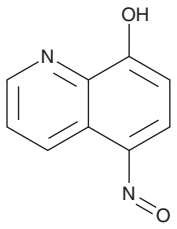
PRODUCT INFORMATION

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:	$C_9H_6N_2O_2$
FW:	174.2
Purity:	≥95%
UV/Vis.:	λ_{max}: 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^{2+} chelation motif compared to SAHA.[1,2] 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.[1,2] Additionally, 5-nitroso-8-quinolinol inhibits *T. gondii* tachyzoite propagation in human fibroblasts with an EC_{50} value of 80 nM and inhibits *P. falciparum* growth in human red blood cells with an EC_{50} value of 1.3 µM.[3]

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).

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