

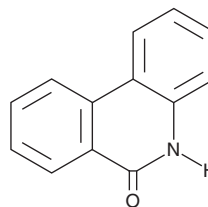
# PRODUCT INFORMATION



## 6(5H)-Phenanthridinone

Item No. 28730

CAS Registry No.: 1015-89-0  
Synonyms: NSC 11021, NSC 40943, NSC 61083  
MF: C<sub>13</sub>H<sub>9</sub>NO  
FW: 195.2  
Purity: ≥98%  
UV/Vis.: λ<sub>max</sub>: 231, 237, 250, 259, 323, 337 nm  
Supplied as: A 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

6(5H)-Phenanthridinone is supplied as a solid. A stock solution may be made by dissolving the 6(5H)-phenanthridinone in the solvent of choice, which should be purged with an inert gas. 6(5H)-Phenanthridinone is soluble in the organic solvent dimethyl formamide (DMF) at a concentration of approximately 1 mg/ml.

6(5H)-Phenanthridinone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 6(5H)-phenanthridinone should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 6(5H)-Phenanthridinone has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

6(5H)-Phenanthridinone is an inhibitor of poly(ADP-ribose) polymerase 1 (PARP1) and PARP2 (EC<sub>50</sub>s = 10.2 and 36.3 μM, respectively, in yeast cells expressing the human enzymes).<sup>1</sup> It decreases radiation-induced PARP activity and proliferation of RDM4 murine lymphoma cells when used at a concentration of 50 μM.<sup>2</sup> 6(5H)-Phenanthridinone reduces NF-κB-induced transcription of the genes encoding TNF-α, IL-2, and IFN-γ in rat lymphocytes.<sup>3</sup> *In vivo*, 6(5H)-phenanthridinone (60 mg/kg) reduces spinal cord expression of inducible nitric oxide synthase (iNOS), IL-1β, TNF-α, IL-2, and IFN-γ and reduces disease score in a rat model of experimental autoimmune encephalomyelitis (EAE). It also decreases serum levels of lactate dehydrogenase as well as hepatic lipid peroxidation, oxidative DNA damage, and PARP levels in a mouse model of carbon tetrachloride-induced hepatotoxicity when administered at a dose of 10 mg/kg.<sup>4</sup>

### References

1. Perkins, E., Sun, D., Nguyen, A., *et al.* Novel inhibitors of poly(ADP-ribose) polymerase/PARP1 and PARP2 identified using a cell-based screen in yeast. *Cancer Res.* **61**(10), 4175-4183 (2001).
2. Weltin, D., Holl, V., Hyun, J.W., *et al.* Effect of 6(5H)-phenanthridinone, a poly (ADP-ribose)polymerase inhibitor, and ionizing radiation on the growth of cultured lymphoma cells. *Int. J. Radiat. Biol.* **72**(6), 685-692 (1997).
3. Chiarugi, A. Inhibitors of poly(ADP-ribose) polymerase-1 suppress transcriptional activation in lymphocytes and ameliorate autoimmune encephalomyelitis in rats. *Br. J. Pharmacol.* **137**(6), 761-770 (2002).
4. Banasik, M., Stedeford, T., Strosznajder, R.P., *et al.* Inhibition of poly(ADP-ribose) polymerase-1 attenuates the toxicity of carbon tetrachloride. *J. Enzyme Inhib. Med. Chem.* **26**(6), 883-889 (2011).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM