

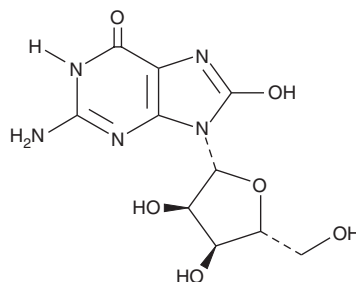
# PRODUCT INFORMATION



## 8-Hydroxyguanosine

Item No. 89300

**CAS Registry No.:** 3868-31-3  
**Formal Name:** 7,8-dihydro-8-oxo-guanosine  
**Synonyms:** 7,8-Dihydro-8-oxoguanosine, 8-oxo-G, NSC 90393, 8-OHG  
**MF:** C<sub>10</sub>H<sub>13</sub>N<sub>5</sub>O<sub>6</sub>  
**FW:** 299.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 250, 296 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

8-Hydroxyguanosine is supplied as a crystalline solid. A stock solution may be made by dissolving the 8-hydroxyguanosine in the solvent of choice, which should be purged with an inert gas. 8-Hydroxyguanosine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 8-hydroxyguanosine in ethanol and DMF is approximately 50 µg/ml and approximately 12 mg/ml in DMSO. The solubility of 8-hydroxyguanosine in 0.1 M HCl is approximately 10 mg/ml.

### Description

8-Hydroxyguanosine is an oxidized nucleoside and a marker of RNA oxidative damage.<sup>1</sup> Levels of 8-hydroxyguanosine increase in HeLa cells in a concentration-dependent manner when cultured with hydrogen peroxide. It has been detected in neurons in postmortem brain from patients with Alzheimer's or Parkinson's disease.<sup>2,3</sup>

### References

1. Wu, J. and Li, Z. Human polynucleotide phosphorylase reduces oxidative RNA damage and protects HeLa cell against oxidative stress. *Biochem. Biophys. Res. Commun.* **372(2)**, 288-292 (2008).
2. Nunomura, A., Perry, G., Pappolla, M.A., *et al.* RNA oxidation is a prominent feature of vulnerable neurons in Alzheimer's disease. *J. Neurosci.* **19(6)**, 1959-1964 (1999).
3. Zhang, J., Perry, G., Smith, M.A., *et al.* Parkinson's disease is associated with oxidative damage to cytoplasmic DNA and RNA in substantia nigra neurons. *Am. J. Pathol.* **154(5)**, 1423-1429 (1999).

#### 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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