

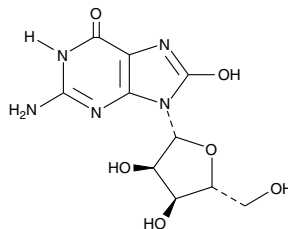
Product Information



8-hydroxy Guanosine

Item No. 89300

Formal Name:	8-hydroxy-guanosine
MF:	C ₁₀ H ₁₃ N ₅ O ₆
FW:	299.2
Purity:	≥98%
Stability:	≥1 year at room temperature
Supplied as:	A crystalline solid
UV/Vis.:	λ _{max} : 250, 296 nm ε: 10,300



Laboratory Procedures

For long term storage, we suggest 8-hydroxy Guanosine be stored as supplied at room temperature. It will be stable for at least one year.

8-hydroxy Guanosine is supplied as a crystalline solid. A stock solution may be made by dissolving the 8-hydroxy guanosine in an organic solvent purged with an inert gas. 8-hydroxy Guanosine is soluble in organic solvents such as DMSO. The solubility of 8-hydroxy guanosine in this solvent is approximately 12 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. For maximum solubility in aqueous buffers, 8-hydroxy guanosine should first be dissolved in 0.1M HCl (solubility is at least 10 mg/mL) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. The pH of HCl will be neutralized by the PBS (pH 7.2) at a rate of 1:3.5. We do not recommend storing the aqueous solution for more than one day.

8-hydroxy Guanosine is produced by oxidative damage of RNA.^{1,2} It can be measured in cell digests or in biological fluids as a marker of oxidative stress. When 8-hydroxy guanosine (5-8 mM) is added to Friend erythroleukemia cells, it acts as a growth inhibitor in addition to promoting differentiation.^{3,4}

References

1. Floyd, R.A. Role of oxygen in carcinogenesis and brain ischemia. *FASEB J.* **4**, 2587-2597 (1990).
2. Taddei, E., Hayawaka, H., Bouton, M.-F., *et al.* Counteraction by MutT protein of transcriptional errors caused by oxidative damage. *Science* **278**, 128-130 (1997).
3. Mo, Y., Maki, H., Sekiguchi, M. Hydrolytic elimination of a mutagenic nucleotide, 8-oxodGTP, by human 18-kilodalton protein: Sanitization of nucleotide pool. *Proc. Natl. Acad. Sci. USA* **89**, 11021-11025 (1992).
4. Lin, T.S., Cheng J.C., Ishiguro, K., *et al.* 8-Substituted guanosine and 2'-deoxyguanosine derivatives as potential inducers of the differentiation of friend erythroleukemia cells *J. Med. Chem.* **28**, 1194-1198 (1985).

Related Products

8-hydroxy Guanine - Item No. 89290 • 8-hydroxy-2-deoxy Guanosine - Item No. 89320

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

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