

# PRODUCT INFORMATION



## DNA/RNA Oxidative Damage Monoclonal Antibody (Clone 7E6)

Item No. 20094

### Overview and Properties

<b>Contents:</b>	This vial contains 100 µg of ammonium sulfate purified IgG.
<b>Synonyms:</b>	8-OH-dG, 8-OHG, 8-oxo-G, 7,8-dihydro-8-oxoguanosine
<b>Immunogen:</b>	8-Hydroxy-2-deoxyguanosine
<b>Cross Reactivity:</b>	(+) 8-hydroxy-2-deoxyguanosine, 8-Hydroxyguanosine
<b>Species Reactivity:</b>	Species Independent
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥3 years
<b>Storage Buffer:</b>	PBS, pH 7.2, with 50% glycerol with 0.1% BSA and 0.02% sodium azide
<b>Clone:</b>	7E6
<b>Host:</b>	Mouse
<b>Isotype:</b>	IgG1
<b>Applications:</b>	ELISA and Immunoprecipitation (IP). The recommended starting dilution for ELISA is 1:1,000 and the recommended starting concentration for IP is 10µg/IP reaction. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Description

8-Hydroxy-2'-deoxyguanosine (8-OH-dG; Item No. 89320) and 8-hydroxyguanosine (8-OHG; Item No. 89300) are oxidized nucleosides and markers of DNA and RNA oxidative damage, respectively.<sup>1,2</sup> Levels of 8-OH-dG increase in DNA in the presence of eugenol and hydrogen peroxide or copper sulfate.<sup>3</sup> Levels of 8-OHG increase in response to hydrogen peroxide in HeLa cells in a concentration-dependent manner.<sup>2</sup> 8-OHG has been detected in neurons in postmortem brain from patients with Alzheimer's or Parkinson's disease.<sup>4,5</sup> Cayman's DNA/RNA Oxidative Damage Monoclonal Antibody (Clone 7E6) can be used for affinity purification and ELISA applications.

### References

1. Kasai, H. Analysis of a form of oxidative DNA damage, 8-hydroxy-2'-deoxyguanosine, as a marker of cellular oxidative stress during carcinogenesis. *Mutat. Res.* **387(3)**, 147-63 (1997).
2. 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).
3. Bodell, W.J., Ye, Q., Pathak, D.N., *et al.* Oxidation of eugenol to form DNA adducts and 8-hydroxy-2'-deoxyguanosine: Role of quinone methide derivative in DNA adduct formation. *Carcinogenesis* **19(3)**, 437-443 (1998).
4. 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).
5. 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.

WARRANTY AND LIMITATION OF REMEDY  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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