

PRODUCT INFORMATION



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

Item No. 20094

Overview and Properties

Contents:	This vial contains 100 µg of ammonium sulfate purified IgG.
Synonyms:	8-OH-dG, 8-OHG, 8-oxo-G, 7,8-dihydro-8-oxoguanosine
Immunogen:	8-Hydroxy-2-deoxyguanosine
Cross Reactivity:	(+) 8-hydroxy-2-deoxyguanosine, 8-Hydroxyguanosine
Species Reactivity:	(+) Species independent
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol with 0.1% BSA and 0.02% sodium azide
Clone:	7E6
Host:	Mouse
Isotype:	IgG1
Applications:	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.^{1,2} Levels of 8-OH-dG increase in DNA in the presence of eugenol and hydrogen peroxide or copper sulfate.³ Levels of 8-OHG increase in response to hydrogen peroxide in HeLa cells in a concentration-dependent manner.² 8-OHG has been detected in neurons in postmortem brain from patients with Alzheimer's or Parkinson's disease.^{4,5} 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.

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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