

Anti-8-Hydroxy Guanine (MOUSE) Monoclonal Antibody - 200-301-A99

Code: 200-301-A99

Size: 100 µg

Product Description: Anti-8-Hydroxy Guanine (MOUSE) Monoclonal Antibody - 200-301-A99

Concentration: 1.0 mg/mL by UV absorbance at 280 nm

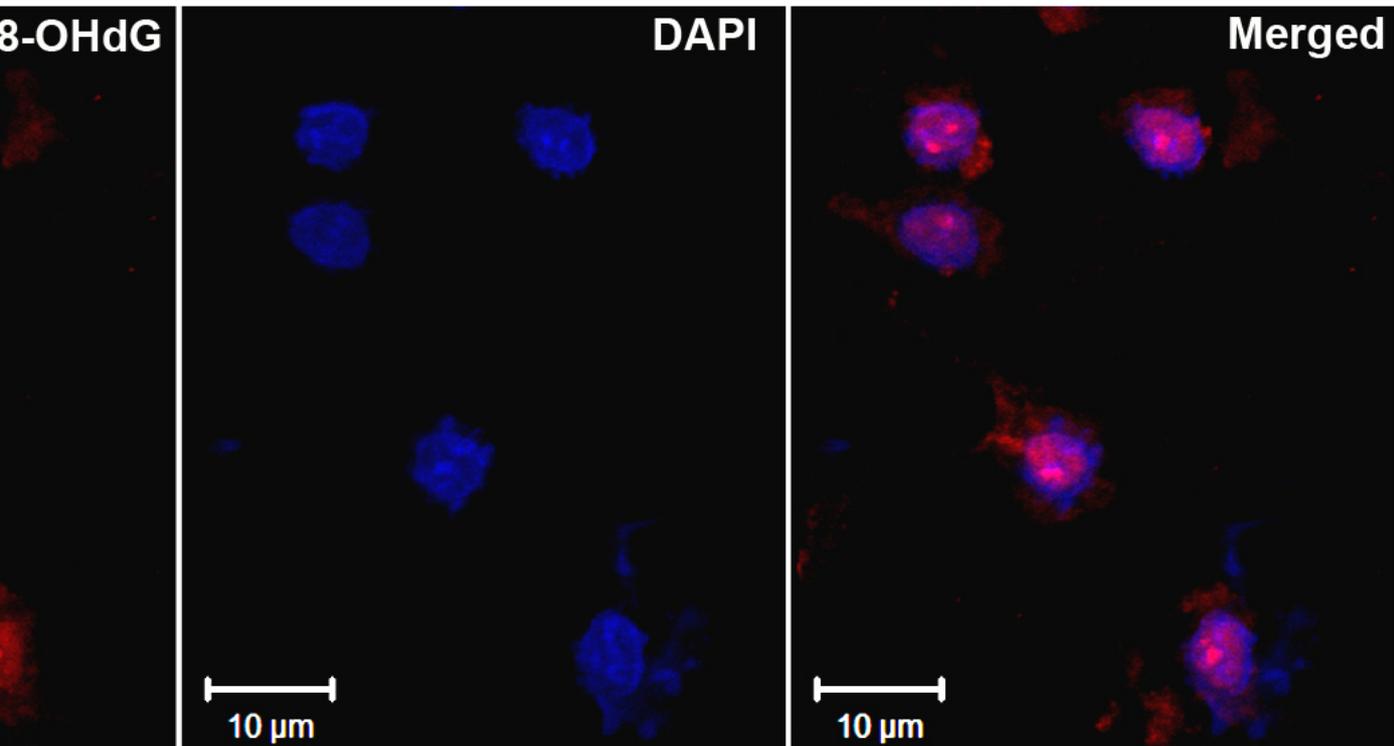
PhysicalState: Liquid (sterile filtered)

Label	Unconjugated
Host	Mouse
Species Reactivity	rat, human, mouse
Buffer	0.01 M Sodium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Stabilizer	50% (v/v) Glycerol
Preservative	0.1% (w/v) Sodium Azide
Storage Condition	Store Anti-8-Hydroxy Guanine antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Synonyms	8 hydroxy 2' deoxyguanosine antibody, 8 hydroxyguanine antibody, 8 hydroxyguanosine antibody, 8 OHG antibody, 8-OHG antibody, 8OG antibody, 8OHdG antibody, 8OHG antibody, 8-Hydroxy Guanine Antibody, 8-OH-dG Antibody, DNA/RNA Damage Antibody
Application Note	This Protein G purified antibody has been tested for use in immunohistochemistry, ICC/IF, Dot Blot, IP, Flow Cytometry, and ELISA. Specific conditions for reactivity should be optimized by the end user.
Background	DNA or RNA damage is due to environmental factors and normal metabolic processes inside the cell, that then hinder the ability of the cell to carry out its functions. There are four main types of DNA damage due to endogenous cellular processes: oxidation, alkylation, hydrolysis and mismatch of the bases. During the oxidation of bases, highly reactive chemical entities collectively known as RONS may develop. RONS stands for reactive oxygen and nitrogen species and includes nitric oxide, superoxide, hydroxyl radical, hydrogen peroxide and peroxyxynitrite. Numerous studies have shown that RONS cause a variety of other issues in addition to DNA damage. 8-hydroxyguanine, 8-hydroxy-2'-deoxyguanosine and 8-hydroxyguanosine are all RNA and DNA markers of oxidative damage. 8-hydroxy-2'-guanosine is produced by reactive oxygen and nitrogen species including hydroxyl radical and peroxyxynitrite. Specifically its high biological relevance is due to its ability to induce G to T transversions, which is one of the most frequent somatic mutations (2). 8-hydroxy-guanine has been the most frequently studied type of DNA base damage, with studies in diabetes, and cancer. Base modifications of this type arise from radical-induced hydroxylation and cleavage reactions of the purine ring. Finally, 8-hydroxy-guanosine, like 8-hydroxy-2'-guanosine, induces a mutagenic transversion of G to T in DNA. Its role has been tested specifically in the development of diabetes, hypertension and strokes.
Purity And Specificity	This Protein G purified Anti-8-Hydroxy Guanine monoclonal antibody recognizes markers of oxidative damage to DNA (8-hydroxy-2'-deoxyguanosine, 8-hydroxyguanine and 8-hydroxyguanosine).
Assay Dilutions	User Optimized
ELISA	User Optimized
Immunohistochemistry	1:1000
IF Microscopy	User Optimized
Flow Cytometry	User Optimized
Other Assays	User Optimized
Expiration	Expiration date is one (1) year from date of opening.
Immunogen	This Protein G purified monoclonal antibody was prepared using conventional hybridoma technology after repeated immunizations with 8-hydroxy-guanosine-BSA and casein conjugates.
General Reference	Kim H.W., Murakami A., Williams M.V., and Ohigashi H. (2003) Carcinogenesis 24(2): 235-241. Pilger A. and Rudiger H.W. (2006) Int Arch Occup Environ Health. 80(1): 1-15. Malins D.C. and Haimanot R. (1991) Cancer Res. 51(19): 5430-5432. Kvam E. and Tyrrell R.M. (1997) Carcinogenesis 18(11): 2281-2283. Kowluru R.A., Atasi L., and Ho Y.S. (2006) Invest Ophthalmol Vis Sci 47(4): 1594-9. Bowers R. et al. (2004) Am J Respir Crit Care Med. 169(6): 764-9. Cui J., Holmes E.H., Greene T.G., and Liu P.K. (2000) Faseb J. 14(7): 955-67.
Related Products	

200-301-174	Anti-p53 (MOUSE) Monoclonal Antibody - 200-301-174
610-4302	Anti-MOUSE IgG (H&L) (RABBIT) Antibody Peroxidase Conjugated - 610-4302
MB-009-1000	UltraPure Sterile Water - MB-009-1000
MB-070	Blocking Buffer for Fluorescent Western Blotting - MB-070

Images

- 1 Immunofluorescence of mouse monoclonal anti-8-hydroxy-guanine antibody Tissue: Ischemic rat brain Fixation: formalin fixed paraffin embedded Antigen retrieval: not required Primary antibody: 8 hydroxy guanine antibody Localization: nuclear Staining: antibody as red signal with a DAPI blue nuclear counterstain.



Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.