

Anti-DNA/RNA Damage antibody [15A3] ab62623

★★★★★ [14 Abreviews](#) [143 References](#) [6 Images](#)

Overview

Product name	Anti-DNA/RNA Damage antibody [15A3]
Description	Mouse monoclonal [15A3] to DNA/RNA Damage
Host species	Mouse
Specificity	Recognizes markers of oxidative damage to DNA (8-hydroxy-2'-deoxyguanosine, 8-hydroxyguanine and 8-hydroxyguanosine).
Tested applications	Suitable for: IHC-P, ICC, ELISA, IHC-Fr
Species reactivity	Reacts with: Species independent
Immunogen	Chemical/ Small Molecule corresponding to DNA/RNA Damage. 8-hydroxy-guanosine-BSA and -casein conjugates.
Positive control	IHC-P: Mouse inflamed colon and backskin tissues. Fresh IHC: Ischemic rat brain tissue.
General notes	<p>Please see the protocol booklet link below for recommended IHC and ICC staining procedure</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS, 50% Glycerol
Purity	Protein G purified
Clonality	Monoclonal
Clone number	15A3

Isotype	IgG2b
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab62623 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

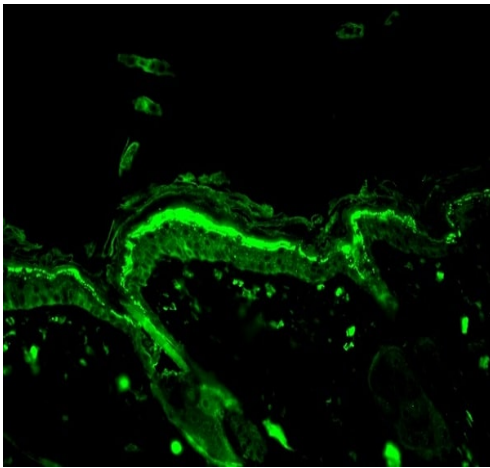
Application	Abreviews	Notes
IHC-P	★★★★★ (4)	Use a concentration of 1 - 10 µg/ml. Dilute antibody in PBS containing 0.3% Triton X-100, 0.08% sodium azide and 2% normal goat serum.
ICC	★★★★★ (1)	Use at an assay dependent concentration.
ELISA	★★★★★ (2)	Use at an assay dependent concentration.
AP		Use at an assay dependent concentration.
IHC-Fr	★★★★★ (2)	Use at an assay dependent concentration.

Target

Relevance

In intact animals, lesions (adducts) excised from DNA are transported from the cell through the circulation and excreted in urine. In bacteria, DNA adducts are excreted directly into the medium. In either case, the adducts can be assayed as a measure of oxidative damage to DNA. In particular, Oxo-8-dG (8-Oxo-7,8-dihydro-2'-deoxyguanosine) serves as an excellent marker for DNA damage produced by oxidants because it represents one of the major products generated by a wide array of treatments associated with oxidant damage such as that produced by irradiation and various carcinogens and because it is implicated in spontaneous transversion mutagenesis. Oxo-8-Gua (8-oxo-7,8-dihydroguanine) is one of the most common DNA lesions resulting from reactive oxygen species and can result in a mismatched pairing with adenine resulting in G to T and C to A substitutions in the genome. In humans, it is primarily repaired by DNA glycosylase OGG1. It can be caused by ionizing radiation, in connection with oxidative metabolism. Oxo-8-G (8-oxo-7,8-dihydroguanosine) is classified as an oxidized ribonucleotide, and is primarily used in studies of oxidative RNA damage and associated RNA repair and RNA turnover mechanisms within the cell. In the cell, Oxo-8-G RNA lesions are formed by reaction with reactive oxygen species (ROS) generated either via normal oxidative metabolic processes, UV ionizing radiation, or exposure to oxidative agents. Oxidative RNA damage can lead to defects in protein synthesis, for example, decreased rates of protein synthesis and production of aggregated or truncated peptides, with important implications in aging and neurodegenerative disorders and atherosclerosis.

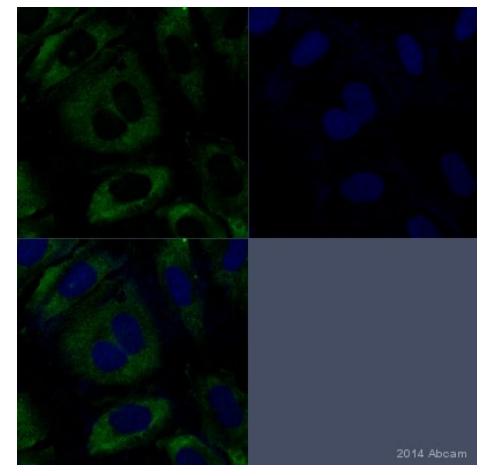
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DNA/RNA Damage antibody [15A3] (ab62623)

Bouin's Fixative, paraffin-embedded mouse backskin tissue stained for DNA/RNA Damage using ab62623 (1 hr at RT) at 1/100 dilution in immunohistochemical analysis.

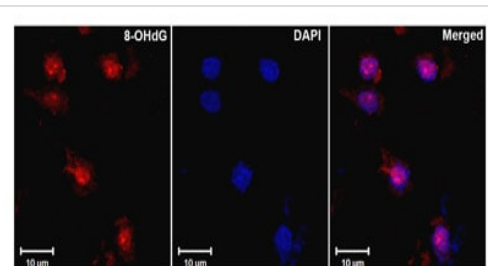
Secondary Antibody: FITC Goat Anti-Mouse (green) at 1/50 for 1 hour at RT.



Immunocytochemistry - Anti-DNA/RNA Damage antibody [15A3] (ab62623)

This image is courtesy of an anonymous Abreview.

Mouse hepatocytes stained for DNA/RNA Damage (green) using ab62623 at 1/500 dilution in ICC/IF, followed by Alexa-Fluor®488 conjugated Goat Anti-Mouse IgG (H+L).



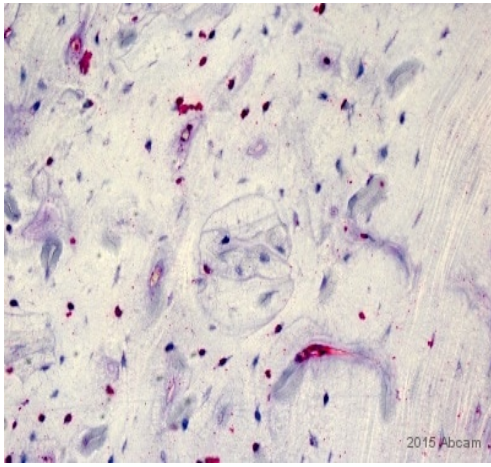
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DNA/RNA Damage antibody [15A3] (ab62623)

Left panel: ab62623 (1/1000 for 16 hours at RT) staining in ischemic rat brain tissue (fresh samples).

Center panel: DAPI staining

Right panel: merged

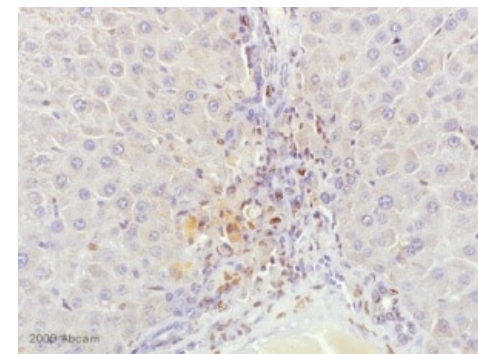
Secondary Antibody: Alexa Fluor®546 Goat Anti-mouse (Red) at 1/500 for 1 hour at RT.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DNA/RNA Damage antibody [15A3] (ab62623)

Image is courtesy of an AbReview submitted by Mr Helder Fonseca.

Immunohistochemical analysis of PFA-fixed paraffin-embedded rat femoral tissue, labeling with ab62623 at a dilution of 1/50 incubated for 13 hours at 4°C in 1% BSA in TBS. Heat mediated antigen retrieval was performed via Tris-EDTA pH 9.0. Blocking was via [ab93695](#) ABC kit incubated at 1% for 20 minutes at room temperature. A secondary was not used, but [ab93695](#) detection kit was used for signal amplification.

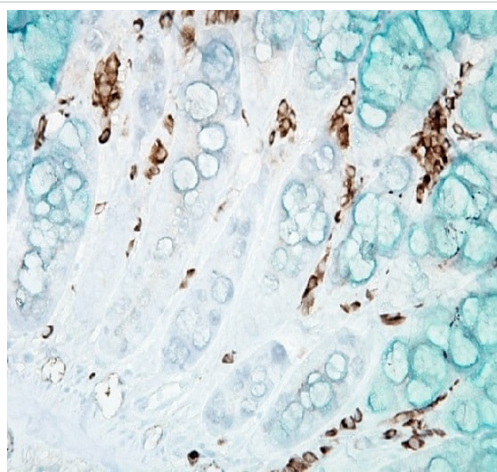


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DNA/RNA Damage antibody [15A3] (ab62623)

This image is a courtesy of Anonymous Abreview

ab62623 staining in rat liver tissue section by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).

Tissue underwent formaldehyde fixation before enzymatic antigen retrieval with Proteinase K solution and then blocking for 20 minutes at 37°C was performed. The primary antibody was diluted 1/4000 and incubated with sample for 2 hours at 37°C. A Biotin conjugated rabbit polyclonal to mouse IgG was used as secondary antibody at 1/200 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DNA/RNA Damage antibody [15A3] (ab62623)

Paraffin-embedded mouse inflamed colon tissue stained for DNA/RNA Damage using ab62623 at 1/1,000,000 dilution (12 hrs at 4°C) in immunohistochemical analysis.

Secondary Antibody: Biotin Goat Anti-Mouse at 1:2000 for 1 hour at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 200 µl for 2 minutes at RT.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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