

## Product datasheet

# Biotin Anti-DNA/RNA Damage antibody [15A3] ab183395

### 1 References

#### Overview

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<b>Product name</b>	Biotin Anti-DNA/RNA Damage antibody [15A3]
<b>Description</b>	Biotin Mouse monoclonal [15A3] to DNA/RNA Damage
<b>Host species</b>	Mouse
<b>Conjugation</b>	Biotin
<b>Specificity</b>	15A3 binds with high specificity and affinity to oxo8dG (8-hydroxy-2'-deoxyguanosine), oxo8Gua (8-oxo-7,8-dihydroguanine), and oxo8G (8-oxo-7,8-dihydroguanosine) present in biological fluids with $K_{aff}$ values of $9.2 \times 10^8 \text{ M}^{-1}$ , $4.7 \times 10^7 \text{ M}^{-1}$ , and $2.1 \times 10^8 \text{ M}^{-1}$ , respectively.
<b>Tested applications</b>	<b>Suitable for:</b> IHC-Fr, IHC-P, ICC
<b>Species reactivity</b>	<b>Reacts with:</b> Species independent
<b>Immunogen</b>	Chemical/ Small Molecule corresponding to DNA/RNA Damage. 8-hydroxy-guanosine-BSA and -casein conjugates.
<b>General notes</b>	<p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications &amp; species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications &amp; species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications &amp; species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.</p> <p>Applications &amp; species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&amp;As.</p>

## Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	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. Store In the Dark.
<b>Storage buffer</b>	Preservative: 0.1% Sodium azide Constituents: 49% PBS, 50% Glycerol (glycerin, glycerine)
<b>Purity</b>	Protein G purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	15A3
<b>Isotype</b>	IgG2b

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab183395** 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-Fr		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration.
ICC		Use at an assay dependent concentration.

## Target

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### 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.

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

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