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DATA SHEET

Mouse Anti-8-Hydroxyguanosine (8-OHdG) [15A3]: MC0042, MC0042RTU7

Intended Use: For Research Use Only

Description: DNA or RNA damage can hinder the ability of a cell to carry out its function and can significantly increase the likelihood of tumor formation. One of the causes of damaged DNA and RNA is oxidation of the bases. 8-hydroxy-2′-deoxyguanosine, 8 hydroxyguanine (8-OHdG) and 8-hydroxyguanosine are all markers of oxidative damage to RNA and DNA. 8-hydroxy-2′-deoxyguanosine is produced by reactive oxygen and nitrogen species, including hydroxyl radical and peroxynitrite. 8-OHdG is one of the major base lesions involved in mutagenesis and is caused by ionizing radiation and radiomimetic agents. 8-hydroxy-guanosine induces a transversion of G to T in DNA, which may be mutagenic. This antibody has applications in the development of immunoassays that can monitor 8OHdG excretion in the urine and serve as a biomarker of oxidative stress. Industrial uses may extend to the dietary supplement manufacturers, who could benefit from an immunoassay that could be used to test the effectiveness of antioxidants and other nutraceuticals.

Specifications

Clone:	15A3
Source:	Mouse
Isotype:	IgG2b
Reactivity:	Species independent
Immunogen:	8-hydroxyguanosine (8-OHdG)-BSA and -casein conjugates
Localization:	Nucleus, cytoplasm
Formulation:	Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3)
Storage:	Store at 2°- 8°C
Applications:	IHC, ELISA, ICC/IF

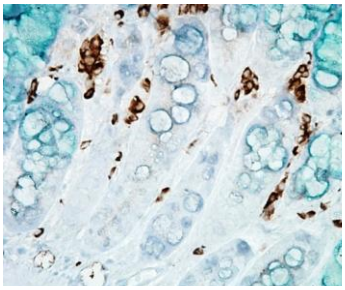
Package:

Description	Catalog No.	Size
8-Hydroxyguanosine (8-OHdG) Concentrated	MC0042	1 ml
8-Hydroxyguanosine (8-OHdG) Prediluted	MC0042RTU7	7 ml

IHC Procedure*

Positive Control Tissue:	Colon, kidney, brain
Concentrated Dilution:	50-500
Pretreatment:	Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C
Incubation Time and Temp:	30-60 minutes @ RT
Detection:	Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE inflamed mouse colon stained with anti-8-OHdG using DAB

References

1. Urinary 8-hydroxy-2′-deoxyguanosine (8-OHdG) and genetic polymorphisms in breast cancer patients. Kuo, HW., et al. Mutat Res. 631: 62-8, 2007.
2. Accumulation of the oxidative base lesion 8-hydroxyguanine in DNA of tumor-prone mice defective in both the Myh and Ogg1 DNA glycosylases. Russo, MT., et al. Cancer Res. 64: 4411-4, 2004.
3. Prognostic and aetiological relevance of 8-hydroxyguanosine in human breast carcinogenesis. Musarrat, J., et al. Eur J Cancer. 32A: 1209-14, 1996.

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