

8-OHdG (15A3): sc-66036

BACKGROUND

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-hydroxyguanine 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. Markers of DNA and RNA damage are useful research tools when studying the effects of this type of damage.

REFERENCES

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2. Parker, A.R., et al. 2002. 8-hydroxyguanosine repair is defective in some microsatellite stable colorectal cancer cells. *Cancer Res.* 62: 7230-7233.
3. Abe, T., et al. 2002. Alteration of 8-hydroxyguanosine concentrations in the cerebrospinal fluid and serum from patients with Parkinson's disease. *Neurosci. Lett.* 336: 105-108.
4. Winter, D.B., et al. 2003. Normal somatic hypermutation of Ig genes in the absence of 8-hydroxyguanine-DNA glycosylase. *J. Immunol.* 170: 5558-5562.

SOURCE

8-OHdG (15A3) is a mouse monoclonal antibody raised against 8-hydroxyguanosine (8-OHdG)-BSA and -casein conjugates.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

8-OHdG (15A3) is recommended for detection of 8-OHdG (8-hydroxy-2'-deoxyguanosine, 8-hydroxyguanine and 8-hydroxyguanosine) by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SELECT PRODUCT CITATIONS

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14. Gozeler, M.S., et al. 2019. Levosimendan ameliorates cisplatin-induced ototoxicity: rat model. *Int. J. Pediatr. Otorhinolaryngol.* 122: 70-75.
15. Gong, F., et al. 2019. IDH2 protects against nonalcoholic steatohepatitis by alleviating dyslipidemia regulated by oxidative stress. *Biochem. Biophys. Res. Commun.* 514: 593-600.

CONJUGATES

See **8-OHdG (E-8): sc-393871** for 8-OHdG antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.