

ORDERING INFORMATION

Description	Anti-8-oxoA, a mouse monoclonal antibody targeting oxidative damage in RNA, DNA, ATP and other nucleotide precursors and degradation products
Catalog #:	12503
Sizes:	100 ug, 500 ug

SPECIFICATION SUMMARY

Antigen Target:	8-Oxo-Adenosine
Specificity	This antibody recognizes 8-oxoA in single and double stranded RNA and DNA and also in free nucleotides such as 8-oxoATP
Background:	This target is a byproduct of oxidative damage to the adenosine nucleobase in DNA, RNA, and nucleotides such as ATP. In DNA, 8-oxoA mispairs may reduce fidelity of replication and cause transcriptional errors by RNA pol II. In RNA, 8-oxoA damage leads to attenuation of mRNA translation. Specialized base excision repair machinery and nucleotide sanitation processes are present to reduce the mutagenic consequences of 8-oxoA.
Host:	Mouse
Isotype:	IgG1k
Immunogen:	8-Oxo-A conjugated to KLH
Clonality:	Monoclonal
Clone ID:	6E4
Target PubChem:	96852
Target Synonyms:	8-oxoA, 8-Oxoadenosine, 8-Hydroxyadenosine, 7,8-dihydro-8-oxoadenosine, 6-Azanyl-9-[(2r,3r,4s,5r)-3,4-Dihydroxy-5-(Hydroxymethyl)oxolan-2-Yl]-7h-Purin-8-One
Target Molecular Wt.	283.24 g/mol

PROPERTIES

Form:	Liquid
Concentration:	Lot Specific
Formulation:	Phosphate Buffered Saline, pH 7.4
Cryo-preserved:	None
Anti-Microbial:	None
Purification:	Protein G Affinity Chromatography

8-Oxo-A DNA/RNA Damage Monoclonal Antibody

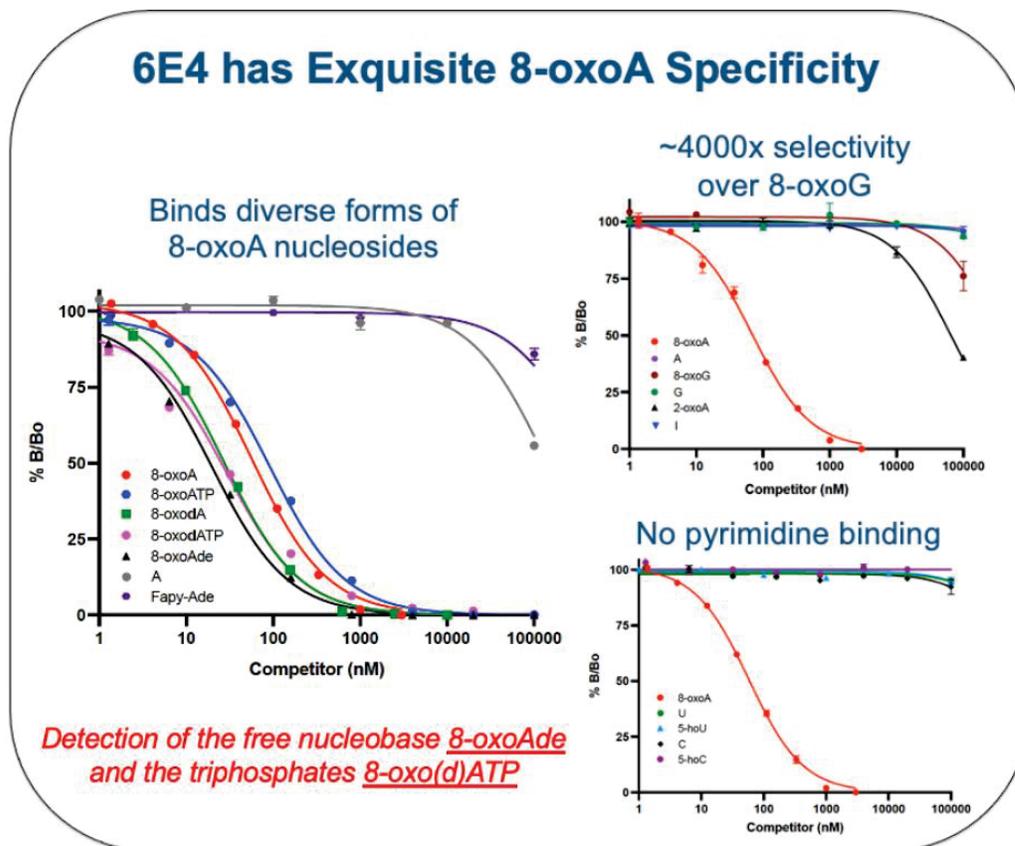
APPLICATIONS

Applications:

ELISA

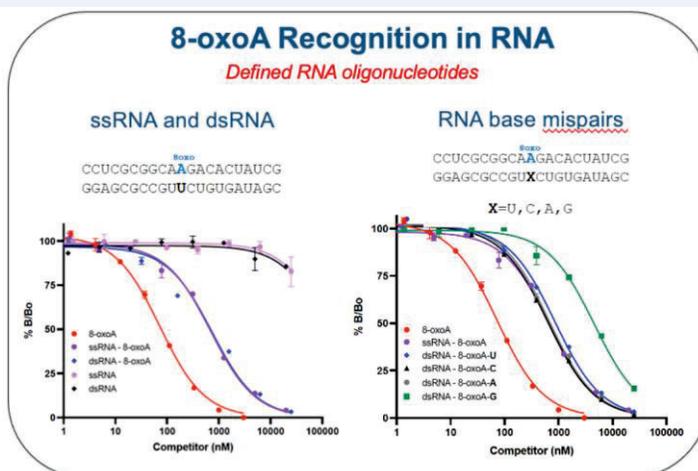
Dilution Instructions:

Dilute in PBS or medium that is identical to that used in the assay system. Optimal concentrations must be derived for specific applications.



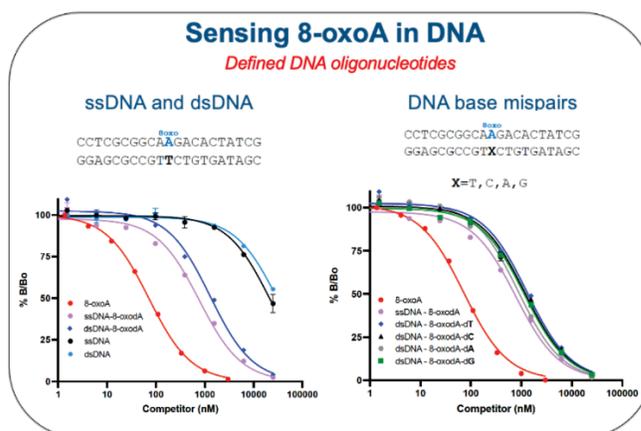
Determined by a competitive inhibition ELISA with nucleoside variants. The %B/B0 is plotted as a function of the concentration (nM) of the indicated competitor. 100% B/B0 indicates no inhibition by the indicated competitor.

8-Oxo-A DNA/RNA Damage Monoclonal Antibody



Selectivity and Specificity of 6E4 in RNA:

- * Binds 8-oxoA in single and double stranded RNA
- * Recognizes 8-oxoA in RNA base mispairs with standard geometry



Selectivity and Specificity of 6E4 in DNA:

- * Binds 8-oxoA in single and double stranded DNA
- * Recognizes 8-oxoA in all DNA base mispairs

STORAGE AND STABILITY

Storage Conditions: Store antibody at -20C to -80C. Avoid multiple freeze-thaw cycles.

Stability: Antibody is stable for at least 1 year when stored at -20C to -80C.

REFERENCES

Daniel J. Tew a, Jakob M. Hebert b, Brad J. Schmier, Discovery and properties of a monoclonal antibody targeting 8-oxoA, an oxidized adenine lesion in DNA and RNA, Redox Biology 62 (2023) 102658, PMC10074937