

PRODUCT DATA SHEET

Product: Anti-Nitroguanosine, clone NO₂G52

Cat. No.: MC-338 (50 µg)

Background:

8-Nitroguanosine is a nitrated base of DNA and RNA. It is formed by peroxyxynitrite, which is generated from nitric oxide and superoxide anion radical. It is known that a large amount of nitric oxide molecules and superoxide anion, generated by inflammation, causes nitration of guanosine. Since chemically modified nucleotides cause mutation during DNA replication, 8-nitroguanosine is thought to be one of the markers of DNA damage related to mutation and cancer.

Specificity:

Because of its very high specificity, monoclonal antibody NO₂G52 recognizes 8-nitroguanine and 8-nitroguanosine, but it does not cross-react with normal nucleotide bases, 8-hydroxyguanine, 8-hydroxydeoxy-guanosine, 3-nitrotyrosine, xanthine or 2-nitroimidazole. NO₂G52 has very high affinity for 8-nitroguanine and 8-nitroguanosine, and it slightly cross-reacts with 8-bromoguanosine, 8-bromoguanine and 8-chloroguanine.

Immunoreactivity [IC₅₀]:

Strongly reacts (10 µmol/l): 8-NO₂-guanosine, 8-NO₂-guanine.

Slightly cross-reacts (>1 mmol/l): 8-Br-guanosine, 8-Br-guanine, 8-Cl-guanine.

No cross-reaction: guanosine, guanine, 8-OH-guanine, 8-OH-deoxyguanosine, xanthine, adenine, adenosine, thymine, deoxythymidine, uracil, uridine, 3-NO₂-tyrosine, 2-NO₂-imidazole, cytosine.

Species Reactivity:

All species.

Ig Isotype:

Mouse IgG1

Format:

1 mg/ml solution in PBS containing 0.1% ProClin as a preservative.

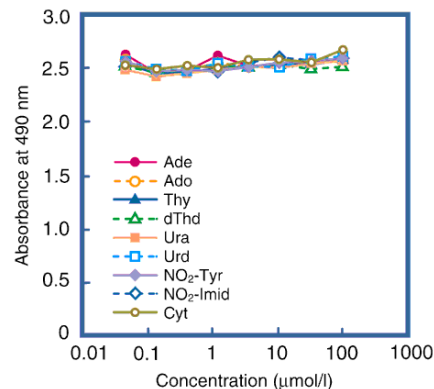
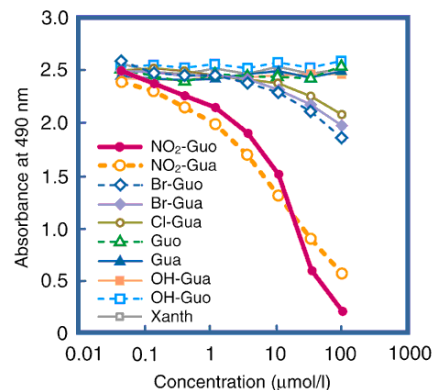
Storage:

Store at -20°C.

Applications and Suggested Dilutions:

- ELISA: Use at 1 µg/ml
- Immunohistochemistry: Use at 10 µg/ml.

The optimal dilution for a specific application should be determined by the researcher.



Competitive ELISA using an 8-nitroguanosine-BSA-coated plate.

Limitations:

For *in vitro* research use only. Not for use in diagnostics or in humans.

Warranty:

No warranties, expressed or implied, are made regarding the use of this product. KAMIYA BIOMEDICAL COMPANY is not liable for any damage, personal injury, or economic loss caused by this product.