3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Monoclonal Anti-3-Nitrotyrosine
Clone 18G4
produced in mouse, purified immunoglobulin

Catalog Number **N5538**

Product Description

Monoclonal Anti-3-Nitrotyrosine (mouse IgG1 isotype) is derived from the hybridoma 18G4 produced by immunizing mice with 3-nitrotyrosine-KLH.

Monoclonal Anti-3-Nitrotyrosine recognizes 3-nitrotyrosine in most species. The antibody may be used in immunoblotting (~55 kDa).

Protein tyrosine nitration results in a post-translational modification that is increasingly receiving attention as an important component of nitric oxide signaling. While multiple nonenzymatic mechanisms are known to be capable of producing nitrated tyrosine residues, most tyrosine nitration events involve catalysis by metalloproteins such as myeloperoxidase, eosinophil peroxidase, myoglobin, the cytochrome P-450s, superoxide dismutase and prostacyclin synthase. Various studies have shown that protein tyrosine nitration is limited to specific proteins and that the process is selective. For example, exposure of human surfactant protein A (SP-A) to oxygen-nitrogen intermediates generated by activated alveolar macrophages resulted in specific nitration of SP-A at tyrosines 164 and 166, while addition of 1.2 mM CO_2 resulted in additional nitration at Tyr^{161}. The presence of nitrotyrosine-containing proteins has shown high correlation to disease states such as atherosclerosis, Alzheimer's disease, Parkinson's disease, and amyotrophic lateral sclerosis.

Reagent

Supplied as a solution in 20 mM sodium phosphate, 150 mM sodium chloride, 50% glycerol, and 3 mM sodium azide, pH 7.5

Antibody concentration: ~1 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –20 °C. For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working dilution of 1:1,000 is recommended using mouse and rat brain.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

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