

Anti-Nitrotyrosine

Catalog# SMC-154 C/D

Size: 25/100µl

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This product is for *in vitro* research use only and is not intended for use in humans or animals

StressMarq

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Product	Mouse Anti-Nitrotyrosine Monoclonal Antibody
Clone	Hybridoma line 39B6
Immunogen	3-(4-Hydroxy-3-nitrophenyl acetamido) propionic acid-BSA conjugate.
Host and Subclass	Mouse, IgG _{2a}
Cited Applications	WB (1), ELISA (1, 6), IHC (1,5), IP
Specificity	Recognizes 3-nitrotyrosine moieties. No detectable cross-reactivity with non-nitrated tyrosine. Not species specific.
Species cross-reactivity	Human, Mouse, Rat, Dog
Format	In PBS containing 0.09% sodium azide in 50% glycerol. Protein G purified.
Concentration and working dilution	1.0mg/mL; 0.7µg/ml was sufficient for detection of 5µg SIN-1 treated BSA by Western Blot
Storage and stability	-20°C; 1 year+; shipped on cold packs or ambient

Scientific Background

Protein tyrosine nitration results in a post-translational modification that is increasingly receiving attention as an important component of nitric oxide signaling (2). 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, eosinophilperoxidase (3), myoglobin, the cytochrome P-450s, superoxide dismutase and prostacyclin synthase.

Nitrotyrosine may also serve as a biomarker for the effects of reactive nitrogen oxides, based on tyrosine residues becoming nitrated in proteins at sites of inflammation induced tissue injury (1). The presence of nitro tyrosine-containing proteins therefore has shown high correlation to disease states such as atherosclerosis,

Alzheimer's disease, Parkinson's disease and amyotrophic lateral sclerosis (4).

Selected References

1. Girault I. *et al.* (2001). *Free Radical Biology and Medicine*, 31 (11): 1375-1387.
2. Gow AJ, Farkouh CR, Munson DA, Posencheq MA, and Ischiropoulos H. (2004). *Am J Physiol Lung Cell Mol Physiol*. 287(2): L262-8.
3. Takemoto K. *et al* (2007). *Acta Med Okayama* 61(1): 17-30.
4. Reynolds MR. *et al.* (2006) *J Neurosci*. 26(42): 10636-45.
5. Pfister H., *et al.* (2002) *Vet Pathol*. 39: 190-199.
6. Khan J. *et al.* (1998) *Biochem J*. 330(2): 795-801.

Certificate of Analysis

0.7µg/ml of SMC-154 was sufficient for detection of 5µg SIN-1 treated BSA by Western Blot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Material Safety Data Sheet

Anti-Nitrotyrosine (Monoclonal Antibody) SMC-154

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The below information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. StressMarq shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalogue for additional terms and conditions of sale.

Hazardous Ingredients

The physical, chemical and toxicological properties of these components have not been fully investigated. It is recommended that all laboratory personnel follow standard laboratory safety procedures when handling this product. Safety procedures should include wearing OSHA approved safety glasses, gloves and protective clothing. Direct physical contact with this product should be avoided.

<u>Known Hazardous Components</u>	<u>CAS Number</u>	<u>Percent</u>
Sodium Azide	26628-22-8	0.09

Physical Data

This product consists of mouse immunoglobulin in PBS containing 0.09% sodium azide in 50% glycerol shipped on gel packs. The physical properties of this product have not been investigated thoroughly.

Fire and Explosion Hazard and Reactivity Data

NOT APPLICABLE

Toxicological Properties

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

Spill and Leak Procedures

Observe all federal, state and local environmental regulations.

- Wear protective equipment.
- Absorb on sand or vermiculite and place in closed containers for disposal.
- Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
- If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.

Authorized: StressMarq Biosciences Inc.

Creation Date: 11/30/07