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Anti-DMPO Antibody [N1664A]

Product Name

90 /100 1 Citation

StressMarq
Biosciences INC.

Discovery through Partnership | Excellence through Quality

Mouse Anti-DMPO Monoclonal IgG1 Catalog No. SMC-189

DMPO Antibody
Description
Mouse Anti-DMPO Monoclonal IgG1
Species Reactivity
Species Independent
Applications
WB, IHC, ICC/IF, IP, ELISA, AM
Antibody Dilution
WB (1:1000), ICC/IF (1:100), ELISA (1:100), IP (25 μ g); optimal dilutions for assays should be determined by the user.
Host Species
Mouse
Immunogen
5,5-dimethyl-2-(8-octanoic acid)-1-pyrrolone-N-oxide conjugated to Ovalbumin
Concentration
1 mg/ml
Conjugates
APC, ATTO 390, ATTO 488, ATTO 594, Biotin, FITC, HRP, PerCP, RPE, Unconjugated
Field Of Use
Not for use in humans. Not for use in diagnostics or therapeutics. For in vitro research use only.
Properties

Storage Buffer

PBS pH7.4, 50% glycerol, 0.09% sodium azide *Storage buffer may change when conjugated

Storage Temperature

-20°C, Conjugated antibodies should be stored according to the product label

Shipping Temperature

Blue Ice or 4°C

Purification

Protein G Purified

Clonality

Monoclonal

Clone Number

N1664A

Isotype

IgG1

Specificity

Recognizes DMPO, DMPO-octanoic acid, DMPO-protein adducts and DMPO-DNA adducts. Does not cross react with non-adducted proteins or DNA.

Cite This Product

StressMarq Biosciences Cat# SMC-189, RRID: AB_10703686

Certificate Of Analysis

A 1:1000 dilution of SMC-189 was sufficient to detect the DMPO nitrone adducts of metmyoglobin when loaded at 100 ng/lane by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Biological Description

Alternative Names

5,5-dimethyl-2-(8-octanoic acid)-1-pyrroline N oxide Antibody, DMPO nitrone adduct Antibody, 55 dimethyl 1 pyrroline N oxide nitrone adduct antibody

Research Areas

Cancer, Cell Signaling, Metabolism, Mitochondrial Markers, Mitochondrial Metabolism, Oxidative Stress, Redox Metabolism

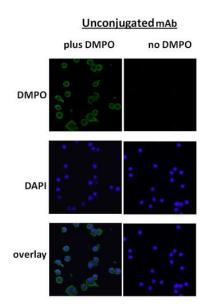
Scientific Background

The formation of free radicals and other highly reactive oxygen species has been implicated in the pathogenesis of many disease states (1). The ability to identify these species is crucial, and spin trapping has accomplished this goal. DMPO (5,5-dimethyl-1-pyrroline N-oxide) is one of the least toxic to cells and animals, and possesses convenient pharmacokinetics (uptake, distribution, metabolism and excretion) in biological systems (2-6). Recent studies have determined that nitric oxide may substantially affect the quantitative determination of DMPO adducts, and therefore extra caution is required when studying generation of these species in the presence of nitric oxide or its radicals (1). DMPO adducts can be generated with protein and DNA radicals (7).

References

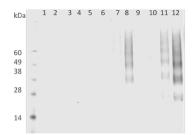
- 1. Reszka K.J., et al. (2006) Nitric Oxide 15: 133-141.
- 2. Ramirez D.C., Gomez-Mejiba S.E., and Mason R.P. (2007) Nat Protoc. 2(3): 512-522.
- 3. Khan N., et al. (2003) Free Radic. Biol. Med 34:1473-1481.
- 4. Haseloff R.F., et al. (1997) FEBS Lett 418:73-75.
- 5. Schaefer C.F., Janzen E.G., West M.S., Poyer J.L., and Kosanke S.D. (1996) Free Radic. Biol. Med 21:427–436.
- 6. Anzai K., et al. (2003) Arch. Biochem. Biophys 415:251–256.
- 7. Free Radic Biol Med. (2009) April 1; 46(7): 853-865. doi:10.1016/j.freeradbiomed.2008.12.020.
- 8. Chatterjee S., et al. (2009) Free Radic. Med.and Biol. 46: 454-461.

Product Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-DMPO Monoclonal Antibody, Clone N1664A (SMC-189). Tissue: macrophage cell line (Raw 264.7). Species: Mouse. Primary Antibody: Mouse Anti-DMPO Monoclonal Antibody (SMC-189) at 1:100. Secondary Antibody: Alexa Fluor 488 Goat Anti-Mouse (green) at 1:1000. Counterstain: DAPI (blue) nuclear stain.

0



- 10 uM Hb
 (hemoglobin)
- 2) 10 uM Hb + 100 uM
- HOCI
- 10 uM Hb + 500 uM HOCI
- 4) 10 uM Hb + 1000 uM HOCI
- 5) 8) as above with 20 mM DMPO
- 9) 12) as above with 100 mM DMPO

Western Blot analysis of Human HL 60 clone 15 eosinophils lysates showing detection of DMPO protein using Mouse Anti-DMPO Monoclonal Antibody, Clone N1664A (SMC-189). Primary Antibody: Mouse Anti-DMPO Monoclonal Antibody (SMC-189) at 1:200.

Product Citations

90/100 | 1 CITATIONS

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".. were converted to stable thionitrone products using DMPO [].. Protein–DMPO adducts, representing the S-DMPO-specific **mouse monoclonal antibody** (1:1000, **Stress Marq Biosciences**, Victoria, BC, Canada) accor (GAM-POX, 1:2000, Cell Signaling, Danvers, .." *More*... | Share Article

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Reviews

Based on validation through cited publications.



StressMarq Biosciences January 17, 2017: