

**DMPO Antibody**  
**DMPO Antibody, Clone N1664A**  
**Catalog # ASM10137****Specification**

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**DMPO Antibody - Product Information**

|             |                                |
|-------------|--------------------------------|
| Application | <b>WB, IHC, ICC, IP, E, AM</b> |
| Host        | <b>Mouse</b>                   |
| Isotype     | <b>IgG1</b>                    |
| Clonality   | <b>Monoclonal</b>              |
| Format      | <b>APC</b>                     |

**Description**

Mouse Anti-DMPO Monoclonal IgG1

**Target/Specificity**

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

**Other Names**

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

**Immunogen**

5,5-dimethyl-2-(8-octanoic acid)-1-pyrrolone-N-oxide conjugated to Ovalbumin

**Purification**

Protein G Purified

Storage **-20°C**

**Storage Buffer**

PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature

**Blue Ice or 4°C**

**Certificate of Analysis**

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

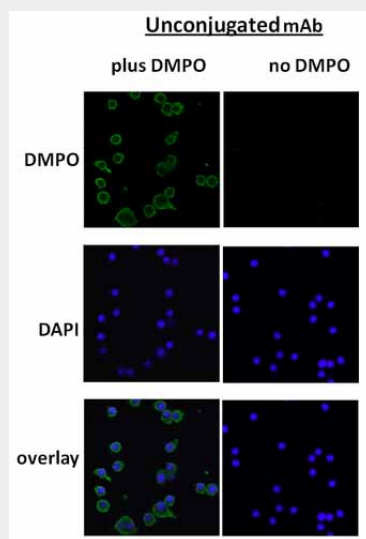
**DMPO Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

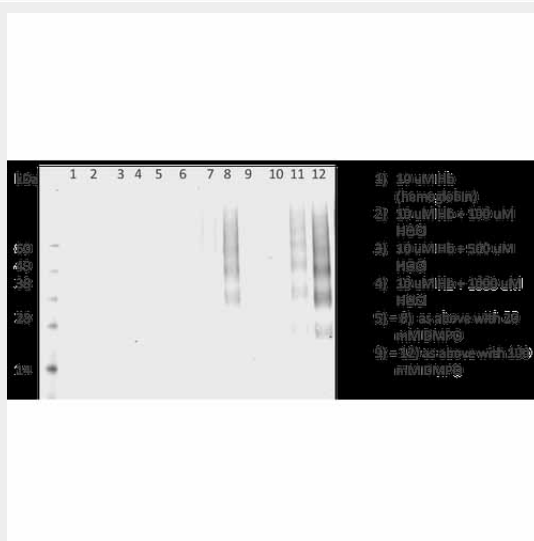
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

## DMPO Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-DMPO Monoclonal Antibody, Clone N1664A (ASM10137). Tissue: macrophage cell line (Raw 264.7). Species: Mouse. Primary Antibody: Mouse Anti-DMPO Monoclonal Antibody (ASM10137) at 1:100. Secondary Antibody: Alexa Fluor 488 Goat Anti-Mouse (green) at 1:1000. Counterstain: DAPI (blue) nuclear stain.



Western Blot analysis of Human HL 60 clone 15 eosinophils lysates showing detection of DMPO protein using Mouse Anti-DMPO Monoclonal Antibody, Clone N1664A (ASM10137). Primary Antibody: Mouse Anti-DMPO Monoclonal Antibody (ASM10137) at 1:200.

## DMPO Antibody - 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).

#### **DMPO Antibody - 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.