

**Datasheet for 200-306-F21****DMPO Antibody****Overview**

|                      |                                                                       |
|----------------------|-----------------------------------------------------------------------|
| <b>Description:</b>  | Anti-DMPO (MOUSE) Monoclonal Antibody Biotin Conjugated - 200-306-F21 |
| <b>Item No.:</b>     | 200-306-F21                                                           |
| <b>Size:</b>         | 100 µg                                                                |
| <b>Applications:</b> | IF, IHC, IP, WB                                                       |
| <b>Reactivity:</b>   | Broad                                                                 |
| <b>Host Species:</b> | Mouse                                                                 |

**Product Details**

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Background:</b>   | The formation of free radicals and other highly reactive oxygen species has been implicated in the pathogenesis of many disease states. 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. 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. DMPO adducts can be generated with protein and DNA radicals. |
| <b>Synonyms:</b>     | 5,5-dimethyl-2-(8-octanoic acid)-1-pyrroline N oxide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Host Species:</b> | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Conjugate:</b>    | Biotin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Clonality:</b>    | Monoclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Clone ID:</b>     | N1664A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Format:</b>       | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

**Target Details**

|                        |       |
|------------------------|-------|
| <b>Reactivity:</b>     | Broad |
| <b>Immunogen Type:</b> | Other |

|                            |                                                                                                                                                                                                                                                                                                                                               |
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| <b>Immunogen:</b>          | DMPO Antibody was produced in mice by repeated immunizations with 5,5-dimethyl-2-(8-octanoic acid)-1-pyrrolone-N-oxide conjugated to Ovalbumin.                                                                                                                                                                                               |
| <b>Purity/Specificity:</b> | Anti-DMPO Antibody was purified by Protein G chromatography. DMPO is species independent. This antibody recognizes DMPO, DMPO-octanoic acid, DMPO-protein adducts and DMPO-DNA adducts. Does not cross react with non-adducted proteins or DNA. Cross-reactivity with DMPO from other sources has not been determined. Neuroscience research. |

## Application Details

|                             |                                                                                                                                                                                                                      |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tested Applications:</b> | IF, IHC, IP, WB                                                                                                                                                                                                      |
| <b>Application Note:</b>    | Anti-DMPO Antibody is tested for use in IP, IF microscopy, IHC and WB. Expect a band approximately ~90kDa corresponding to specific lysates. Specific conditions for reactivity should be optimized by the end user. |
| <b>Assay Dilutions:</b>     | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                      |
| <b>IF:</b>                  | User Optimized                                                                                                                                                                                                       |
| <b>IHC:</b>                 | User Optimized                                                                                                                                                                                                       |
| <b>IP:</b>                  | User Optimized                                                                                                                                                                                                       |

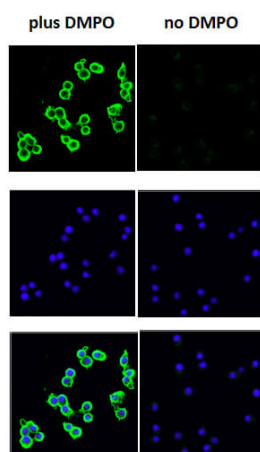
## Formulation

|                        |                                                              |
|------------------------|--------------------------------------------------------------|
| <b>Physical State:</b> | Liquid (sterile filtered)                                    |
| <b>Concentration:</b>  | 1mg/mL by UV absorbance at 280 nm                            |
| <b>Buffer:</b>         | 0.01 M Tris Cl, 0.15 M Sodium Chloride, 0.001 M EDTA, pH 7.4 |
| <b>Preservative:</b>   | 0.05% (w/v) Sodium Azide                                     |
| <b>Stabilizer:</b>     | 50% (v/v) Glycerol                                           |

## Shipping & Handling

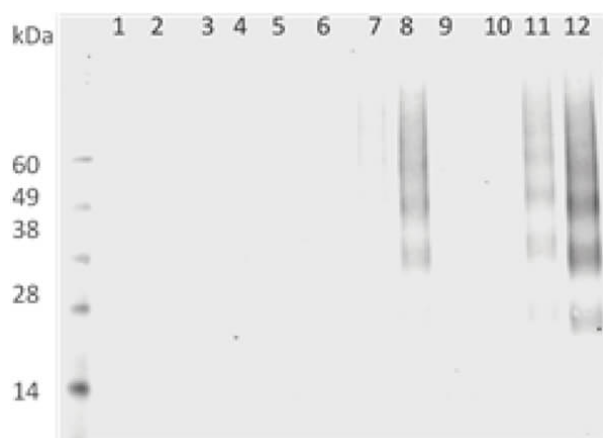
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| <b>Shipping Condition:</b> | Dry Ice                                                                                                                                                                                                                                                                                                                                       |
| <b>Storage Condition:</b>  | Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. |
| <b>Expiration:</b>         | Expiration date is one (1) year from date of receipt.                                                                                                                                                                                                                                                                                         |

## Images



### Immunofluorescence Microscopy

Immunofluorescence Microscopy of Mouse anti-DMPO Biotin conjugated antibody. Tissue: mouse macrophage cell lines. Fixation: 0.5% PFA. Antigen retrieval: not required. Treated: 100  $\mu$ M CuCl<sub>2</sub> to all and 50 mM DMPO to 'plus DMPO'. Primary antibody: DMPO antibody at 10  $\mu$ g/mL for 1 h at RT. Secondary antibody: Fluorescein mouse secondary antibody at 1:10,000 for 45 min at RT. Localization: DMPO is cytoplasmic. Staining: DMPO as green fluorescent signal with DAPI (blue) nuclear counterstain.



### Western Blot

Western Blot of Mouse anti-DMPO antibody. Lane 1: 10uM Hb (Hemoglobin). Lane 2: 10uM Hb + 100uM HOCl. Lane 3: 10uM Hb + 500uM HOCl. Lane 4: 10uM Hb + 1000uM HOCl. Lane 5: 10uM Hb + 20mM DMPO. Lane 6: 10uM Hb + 100uM HOCl + 20mM DMPO. Lane 7: 10uM Hb + 500uM HOCl + 20mM DMPO. Lane 8: 10uM Hb + 1000uM HOCl + 20mM DMPO. Lane 9: 10uM Hb + 100mM DMPO. Lane 10: 10uM Hb + 100uM HOCl + 100mM DMPO. Lane 11: 10uM Hb + 500uM HOCl + 100mM DMPO. Lane 12: 10uM Hb + 1000uM HOCl + 100mM DMPO. Load: 35  $\mu$ g per lane. Primary antibody: DMPO antibody at 1:1000 for ON at 4°C. Secondary antibody: IRDye800™ mouse secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C.

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.