DMPO monoclonal antibody (1)

Oxidative stress resulting in the formation of biological radicals has been implicated in a number of human diseases, such as cancer and aging. There is, however, a paucity of reliable methods for *in vivo* or *ex vivo* detection of radical formation. Until now the only general technique that allowed for the detection of these highly reactive species was electron spin resonance (ESR) using spin traps. One of the most popular of these spin traps is 5,5-dimethyl-1-pyrroline N-oxide (DMPO). In the ESR method, radicals are trapped by DMPO, and the DMPO spin adduct signal is measured quantitatively by an ESR spectrometer. The DMPO, mAb (1) (Prod. No. ALX-803-340) specifically reacts with DMPO-protein and DMPO-DNA adducts and therefore highly simplifies the detection of radical formation compared to the ESR method.

This antibody is covered by our Worry-Free Guarantee.

Citations: 4

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Ordering Information

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ALX-803-340-C100

100µg

Manuals, SDS & CofA

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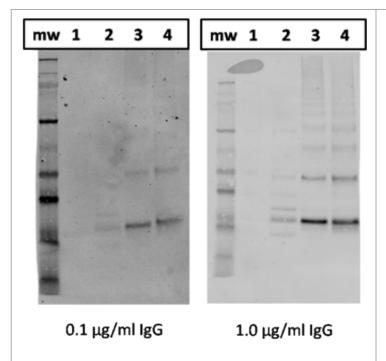


Figure: Western Blot analysis using DMPO, mAb (1) (Prod. No. ALX-803-340).

Method:Samples are 2.5 μg each from reactions containing:

- $1=10 \mu M Mb only$
- 2= 10 μM Mb + 100 mM DMPO
- $3 = 10 \mu M Mb + 100 \mu M H2O2 + 100 mM DMPO$
- 4= 10 μM Mb + 10 μM H2O2 + 10 mM DMPO

Western conditions are:

- -either 0.1 or 1.0 $\mu\text{g/ml}$ anti-DMPO IgG for 1 hr at rt in
- 1XPBS/0.5% Tween
- -wash 4X in 1XPBS/0.5% Tween
- -1:10,000 anti-mouse IR800 for 1 hr at rt in 1XPBS/0.5%

Tween

- -wash 2X in 1XPBS/0.5% Tween, wash 2X in PBS
- -rinse in H2O
- -Scan on Licor Odyssey

Handling & Storage

Handling Dilute only prior to immediate use.

Long Term Storage +4°C

Shipping Blue Ice

Regulatory Status RUO - Research Use Only

Product Details

Alternative Name 5,5-dimethyl-1-pyrroline-N-oxide

Application ELISA, IP, WB

Clone 1

Crossreactivity Does not cross-react with non-adducted proteins or DNA.

Does not cross-react with ovalbumin.

Formulation Liquid. In PBS, pH 7.4, containing 10% glycerol and 0.02%

sodium azide.

Host Mouse

Immunogen DMPO-octanoic acid conjugated to ovalbumin.

lsotype lgG

Purity Detail Protein G-affinity purified.

Recommendation Dilutions/ConditionsWestern Blot (1-10ug/ml)ELISA (1-10ug/ml)Suggested

dilutions/conditions may not be available for all applications. Optimal conditions must be determined

individually for each application.

Source Hybridoma tissue culture supernatant.

Species Reactivity Species independent

Specificity Recognizes DMPO (Prod. No. ALX-430-090), DMPO-

octanoic acid, DMPO-protein adducts and DMPO-DNA

adducts.

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eu@enzolifesciences.com