AbX™

L-Cysteine Mouse Monoclonal

Catalog Number A002-50UG

ARBOR ASSAYS®

FEATURES

- Applications include Western blotting, Immunoassay and Immunoprecipitation
- Supplied in PBS with no carrier protein
- For use under Non-Reducing conditions

INTRODUCTION

Among several postranslational modifications known to date, cysteinylation has received relatively very little interest. Cysteinylation has been implicated in the regulation of immunity, protein kinase C activity and as a marker for utero-placental insufficiency as monitored by serum albumin cysteinylation. Protein S-thiolation by low molecular weight (LMW) thiols prevents the irreversible oxidation of cysteine residues during oxidative stress and plays a role in the redox regulation of thiol-containing proteins. Many Gram-positive bacteria lack glutathione and so the nature of S-thiolation in these organisms remains elusive. In the Gram-positive model organism *Bacillus subtilis*, cysteine represents the most abundant LMW thiol. One of the most obvious responses of *B. subtilis* to oxidative stress is the strong induction of cysteine biosynthesis genes. Although the origins of this effect are unclear, it may be a reflection of consumption of free cysteine by oxidation to cystine and the formation of mixed disulfides with proteins.

The Arbor Assays AbX™ Cysteine Mouse Monoclonal is produced as a Protein A purified antibody. It will measure cysteine-protein complexes under non-reducing conditions.

CLONE NUMBER

F2D

IMMUNOGEN

Cysteine conjugated to Keyhole Limpet Hemocyanin

SUBTYPE

Mouse IgG_{2a}

BUFFER COMPOSITION

Phosphate Buffered Saline at pH 7.2 containing 0.09% Sodium Azide

CONCENTRATION

100 µg/mL

STORAGE

Short Term: 4°C. Extended: Aliquot and freeze at -20°C

USES

Western blotting, Immunoassay, Immunohistochemistry and Immunoprecipitation

SUGGESTED DILUTION

Western blotting, 1:1,000

For Research Use Only

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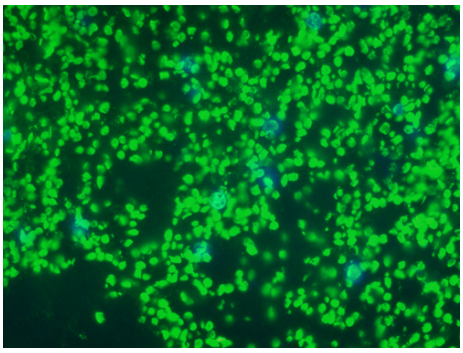
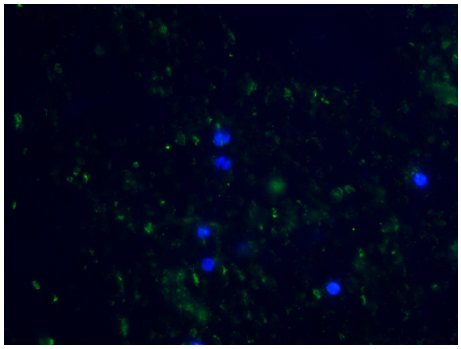
AbX™ Anti-Cysteine Mouse Monoclonal
Catalog Number A002-50UG

IMMUNOHISTOCHEMISTRY

Porcine peripheral red blood cells were paraffin embedded and sectioned. 4 µm sections were de-paraffinized and rehydrated. Sections were incubated with or without additional thiol compounds and anti-cysteine antibody for 2 hours at room temperature. Antibody concentration was 3 µg/mL. Sections were blocked pre- and post antibody treatements with 1% BSA in PBS. Development was with a goat anti-mouse IgG antibody labeled with Alexa™ 488.



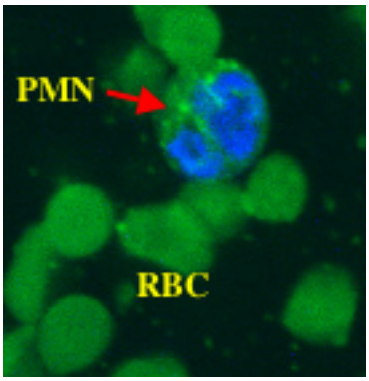
RBC + Anti-Cysteine



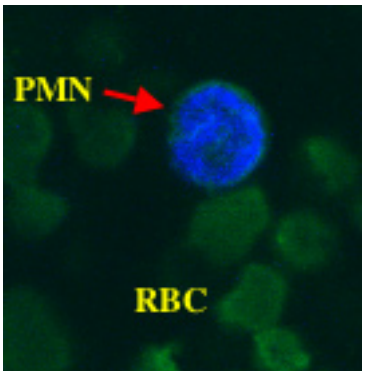
RBC + Anti-Cysteine +
20 mM Cysteine

Cysteine addition was carried out at 20 mM in 1% BSA in PBS and added with the monoclonal anti-cysteine antibody at 3 µg/mL for 1 hour at room temperature.

With polymorphonuclear neutrophils addition of 20 mM cytseine reduced or eliminated the goat anti-mouse IgG-Alexa 488 signal



PMN + Anti-Cysteine



PMN + Anti-Cysteine +
20 mM Cysteine

Nuclear staining was carried out with TOPRO at 1:500 dilution in PBS.

Related Products

DetectX® Thiol Fluorescent Detection Kit Catalog Number K005-F1
Most sensitive, simple assay available