abcam

Product datasheet

Anti-3-Nitrotyrosine antibody [7A12AF6] ab110282

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製品の概要

製品名	Anti-3-Nitrotyrosine antibody [7A12AF6]
製品の詳細	Mouse monoclonal [7A12AF6] to 3-Nitrotyrosine
特異性	ab110282 was developed to recognize only protein-bound nitrotyrosine and so is a sensitive tool for measuring protein-specific modifications from oxidative stress.
アプリケーション	**適用あり:** ICC/IF, Flow Cyt, WB, IP, In-Cell ELISA
種交差性	**交差種:** Mouse, Rat, Cow, Human
免疫原	Nitrated KLH (Keyhole Limpet Hemocyanin).
ポジティブ・コントロール	Flow Cyt: HL-60 cells treated with 2 mM peroxynitrite ICC/IF: HeLa cells and Human fibroblast cells treated with 1 mM peroxynitrite WB: nitrated Bovine heart mitochondria; nitrated tyrosine
特記事項	This antibody clone is manufactured by Abcam. Product was previously marketed under the MitoSciences sub-brand. Anti-3-Nitrotyrosine antibody (Alexa Fluor® 488) [7A12AF6] (ab157402) Anti-3-Nitrotyrosine antibody (HRP) [7A12AF6] (ab198491)

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C. Do Not Freeze.
バッファー	Preservative: 0.02% Sodium azide Constituent: HBS
精製度	>95% by SDS-PAGE
特記事項（精製）	The antibody was produced in vitro using hybridomas grown in serum-free medium, and then purified by biochemical fractionation.
ポリ/モノ	モノクローナル
クローン名	7A12AF6
アイソタイプ	IgG2b
軽鎖の種類	kappa

アプリケーション

Our Abpromise guarantee covers the use of **ab110282** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

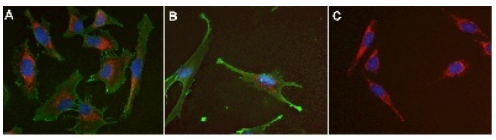
アプリケーション	Abreviews	特記事項
ICC/IF		Use a concentration of 1 µg/ml.
Flow Cyt		Use a concentration of 1 µg/ml. ab170192-Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.
WB		Use a concentration of 1 µg/ml.
IP		Use at an assay dependent concentration.
In-Cell ELISA		Use a concentration of 4 µg/ml. (0.4 µg/well).

ターゲット情報

関連性

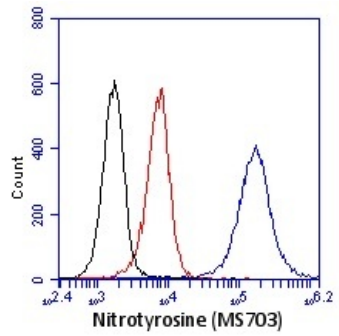
Protein tyrosine nitration results in a post-translational modification that is increasingly receiving attention as an important component of nitric oxide signaling. While multiple nonenzymatic mechanisms are known to be capable of producing nitrated tyrosine residues, most tyrosine nitration events involve catalysis by metalloproteins such as myeloperoxidase, eosinophilperoxidase, myoglobin, the cytochrome P-450s, superoxide dismutase and prostacyclin synthase. Various studies have shown that protein tyrosinenitration is limited to specific proteins and that the process is selective. For example, exposure of human surfactant protein A, SP-A, to oxygen-nitrogen intermediates generated by activated alveolar macrophages resulted in specific nitration of SP-A at tyrosines 164 and 166, while addition of 1.2 mMCO 2 resulted in additional nitration at tyrosine 161. The presence of nitrotyrosine-containing proteins has shown high correlation to disease states such as atherosclerosis, Alzheimer's disease, Parkinson's disease and amyotrophic lateral sclerosis.

Anti-3-Nitrotyrosine antibody [7A12AF6] 画像



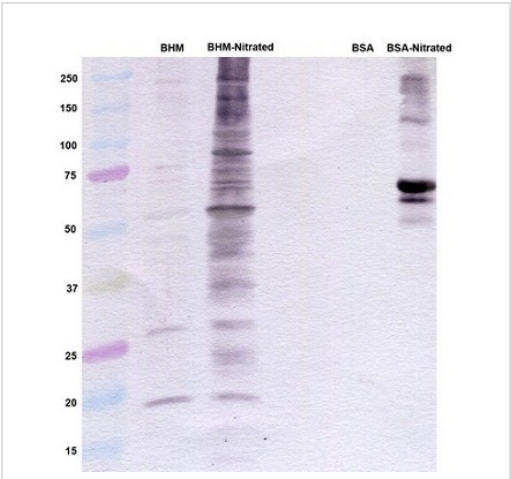
Immunocytochemistry/ Immunofluorescence - Nitrotyrosine antibody [7A12AF6] (ab110282)

Immunocytochemistry image of ab110282 stained Human HeLa cells (A) and fibroblast cells (B, C).
Cells grown on slides were paraformaldehyde fixed (4%, 20 min) and Triton X-100 permeabilized (0.1%, 15 min). Slides were treated with/without 1 mM peroxynitrite to modify exposed tyrosines to 3-nitrotyrosine. Slides were blocked and incubated with tab110282 at 2 µg/ml overnight at 4°C. The secondary antibody (green) was Alexa Fluor® 488 Goat anti-Mouse IgG (H+L) used at a 1/1000 dilution for 1 hour. 10% Goat serum was used as the blocking agent for all blocking steps. For reference, the mitochondria (red) were identified by HSP60 / Alexa Fluor® 594 and DAPI was used to stain the cell nuclei (blue).
HeLa cells (A) and fibroblast cells (B) show surface modification of tyrosine to 3-nitrotyrosine after exposure to peroxynitrite. While (C) unexposed fibroblast cells show no modification.



Flow Cytometry - Nitrotyrosine antibody [7A12AF6] (ab110282)

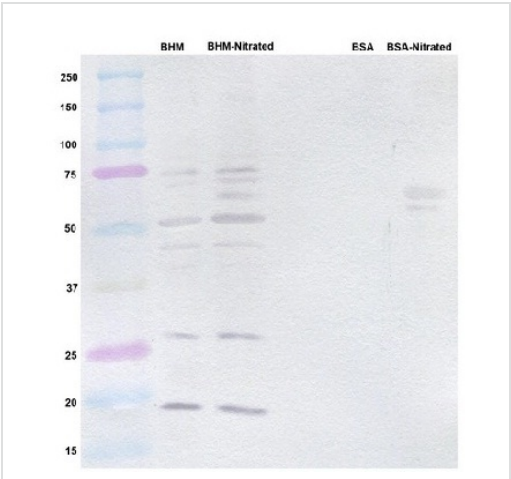
HL-60 cells were stained with 1 µg/ml ab110282 following treatment with 2 mM peroxynitrite (blue) or vehicle control (red). No primary antibody control is shown in black. Peroxynitrite modifies tyrosine residues to 3-nitrotyrosine.



Western blot - Nitrotyrosine antibody [7A12AF6] (ab110282)

All lanes : Anti-3-Nitrotyrosine antibody [7A12AF6] (ab110282) at 1 µg/ml

Lane 1 : Bovine heart mitochondria
Lane 2 : Bovine heart mitochondria - nitrated
Lane 3 : BSA
Lane 4 : BSA - nitrated



Western blot - Nitrotyrosine antibody [7A12AF6] (ab110282)

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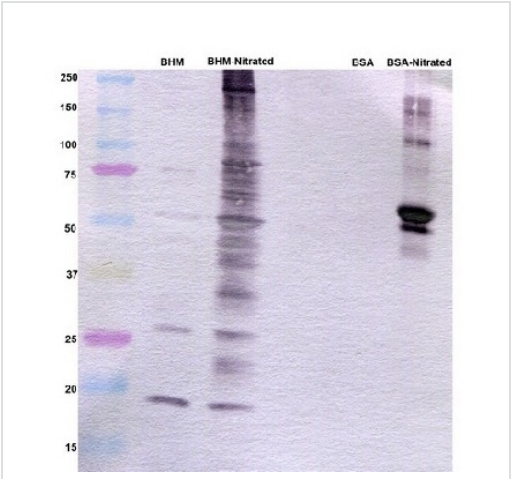
Lane 3 : BSA
Lane 4 : BSA - nitrated

Prior to runnning the samples, the membrane was treated with sodium dithionite to reduce nitrotyrosine to aminotyrosine.



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All lanes : Anti-3-Nitrotyrosine antibody [7A12AF6] (ab110282) at 1 µg/ml

Lane 1 : Bovine heart mitochondria
Lane 2 : Bovine heart mitochondria - nitrated
Lane 3 : BSA
Lane 4 : BSA - nitrated

In this experiment, the antibody was first blocked with free nitrotyrosine before being used to blot the membrane.
The figure shows that ab110282's binding capacity was not inhibited by the free nitrotyrosine, and so only binds to the protein-bound form.

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