

Datasheet for ABIN2868666
anti-HMOX1 antibody (Atto 488)



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2 Images

Overview

Quantity:	100 µg
Target:	HMOX1
Reactivity:	Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This HMOX1 antibody is conjugated to Atto 488
Application:	Western Blotting (WB), Immunocytochemistry (ICC), Immunofluorescence (IF)

Product Details

Immunogen:	His-tagged Rat HO-1
Clone:	6B8-2F2
Isotype:	IgG1 kappa
Specificity:	Detects ~32 kDa. Does not cross-react with HO-2.
Cross-Reactivity:	Human, Mouse, Rat
Purification:	Protein G Purified

Target Details

Target:	HMOX1
Alternative Name:	HO-1 (HMOX1 Products)
Background:	Heme-oxygenase is a ubiquitous enzyme that catalyzes the initial and rate-limiting steps in

Target Details

heme catabolism yielding equimolar amounts of biliverdin, iron and carbon monoxide. Biliverdin is subsequently converted to bilirubin and the free iron is sequestered to ferritin (1). These products have important physiological effects as carbon monoxide is a potent vasodilator, biliverdin and bilirubin are potent antioxidants, and the free iron increases oxidative stress and regulates the expression of many mRNAs (2). There are three isoforms of heme-oxygenase, HO-1, HO-2 and HO-3, however HO-1 and HO-2 are the major isoforms as they both have been identified in mammals (3). HO-1, also known as heat shock protein 32, is an inducible isoform activated by most oxidative stress inducers, cytokines, inflammatory agents and heat shock. HO-2 is a constitutive isoform which is expressed under homeostatic conditions. HO-1 is also considered to be a cytoprotective factor in that free heme is highly reactive and cytotoxic, and secondly, carbon monoxide is a mediator inhibiting the inflammatory process and bilirubin is a scavenger for reactive oxygen, both of which are the end products of heme catalyzation (4). It has also been shown that HO-1 deficiency may cause reduced stress defense, a pro-inflammatory tendency (5), susceptibility to atherosclerotic lesion formation (6), endothelial cell injury, and growth retardation (7). Up-regulation of HO-1 is therefore said to be one of the major defense mechanisms of oxidative stress (4).

Gene ID: 24451

NCBI Accession: [NP_036712](#)

UniProt: [P06762](#)

Pathways: [Transition Metal Ion Homeostasis](#), [Regulation of Leukocyte Mediated Immunity](#), [Positive Regulation of Immune Effector Process](#), [Production of Molecular Mediator of Immune Response](#), [SARS-CoV-2 Protein Interactome](#)

Application Details

Application Notes:

- WB (1:1000)
- ICC/IF (1:100)
- optimal dilutions for assays should be determined by the user.

Comment: 1 µg/ml of ABIN2868666 was sufficient for detection of HO-1 in 10 µg of rat kidney lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Restrictions: For Research Use only

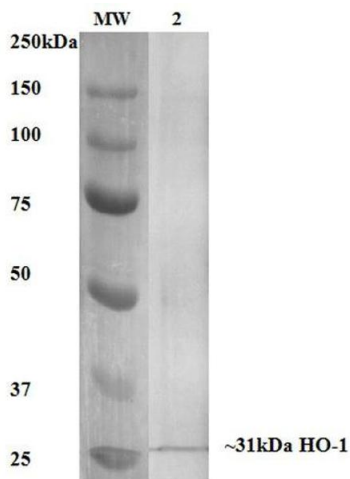
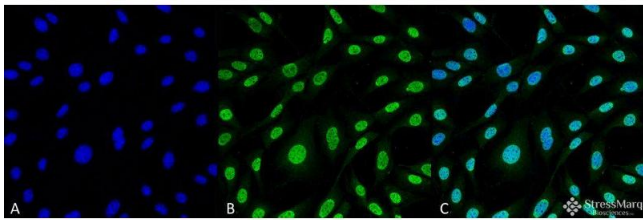
Handling

Format: Liquid

Handling

Concentration:	1 mg/mL
Buffer:	PBS, 50 % glycerol, 0.1 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Conjugated antibodies should be stored at 4°C

Images



Immunofluorescence (fixed cells)

Image 1. Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-HO-1 (Rat) Monoclonal Antibody, Clone 6B8-2F2 . Tissue: Fibroblast cell line (NIH 3T3). Species: Mouse. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-HO-1 (Rat) Monoclonal Antibody at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1:100 for 60 min at RT. Counterstain: DAPI (blue) nuclear stain at 1:5000 for 5 min RT. Localization: Nucleus, Cytoplasm. Magnification: 60X.

Western Blotting

Image 2. Western Blot analysis of Human, Mouse, Rat Rat Kidney Lysate showing detection of ~31 kDa HO-1 protein using Mouse Anti-HO-1 Monoclonal Antibody, Clone 6B8-2F2 . Lane 1: MW Ladder. Lane 2: Rat Kidney Lysate. Block: 5% milk + TBST for 1 hour at RT. Primary Antibody: Mouse Anti-HO-1 Monoclonal Antibody at 1:1000 for 1 hour at RT. Secondary Antibody: HRP Goat Anti-Mouse at 1:50 for 1 hour at RT. Color Development: TMB solution for 5 min at RT. Predicted/Observed Size: ~31 kDa.