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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Anti-HO-1 (Rat) Antibody [6B8-2F2]

Mouse Anti-Rat HO-1 Monoclonal IgG1 Kappa
Catalog No. SMC-234



Discovery through partnership | Excellence through quality

Overview

Product Name

HO-1 (Rat) Antibody

Description

Mouse Anti-Rat HO-1 Monoclonal IgG1 Kappa

Species Reactivity

Human, Mouse, Rat

Applications

WB, ICC/IF

Antibody Dilution

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

Host Species

Mouse

Immunogen Species

Rat

Immunogen

His-tagged Rat HO-1

Concentration

1 mg/ml

Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

Properties

Storage Buffer

PBS, 50% glycerol, 0.1% sodium azide

Storage Temperature

-20°C

Shipping Temperature

Blue Ice or 4°C

Purification

Protein G Purified

Clonality

Monoclonal

Clone Number

6B8-2F2

Isotype

IgG1 Kappa

Specificity

Detects 32kDa. Does not cross-react with HO-2.

Cite This Product

Mouse Anti-Rat HO-1 Monoclonal, Clone 6B8-2F2 (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SMC-234)

Certificate Of Analysis

1 µg/ml of SMC-234 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.

Biological Description

Alternative Names

HSP32 Antibody, HMOX1 Antibody, Heme oxygenase 1 Antibody, HO Antibody, HO1 Antibody

Research Areas

Cancer, Blood, Cardiovascular System, Cell Signaling, Epigenetics, Oxidative Stress

Cellular Localization

Endoplasmic Reticulum, Microsome

Accession Number

NP_036712.1

Gene ID

24451

Swiss Prot

P06762

Scientific Background

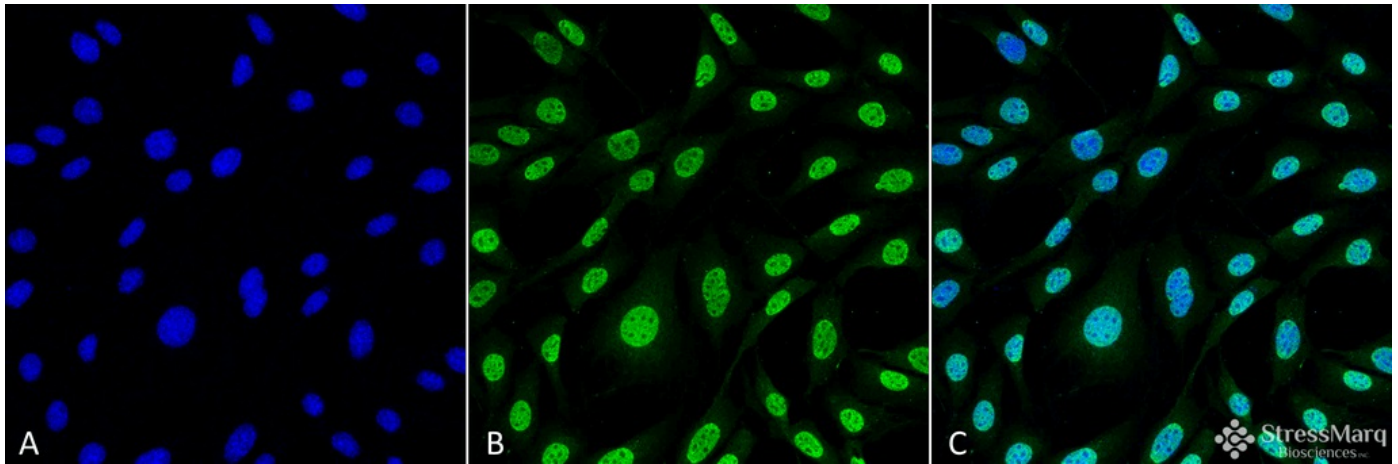
Heme-oxygenase is a ubiquitous enzyme that catalyzes the initial and rate-limiting steps in heme catabolism yielding equimolar amounts of biliverdin, iron and carbon monoxide. Biliverdin is subsequently converted to bilirubin and the free iron is sequestered to ferritin (1). These products have important 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).

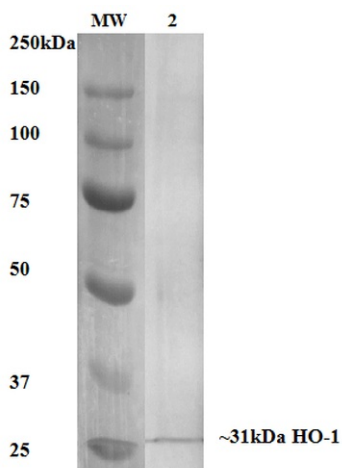
References

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2. Elbirt K.K. and Bonkovsky H.L. (1999) Proc Assoc Am Physicians 111(5): 348-47.
3. Maines M.D., Trakshel G.M., and Kutty R.K. (1986) J Biol Chem 261: 411419.
4. Brydun A., et al. (2007) Hypertens Res 30(4): 341-8.
5. Poss K.D. and Tonegawa S. (1997). Proc Natl Acad Sci U S A. 94: 1092510930.
6. Yet S.F., et al. (2003) FASEB J. 17: 17591761.
7. Yachie A., et al. (1999) J Clin Invest. 103: 129135.

Product Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-HO-1 (Rat) Monoclonal Antibody, Clone 6B8-2F2 (SMC-234). 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 (SMC-234) 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 Blot analysis of Human, Mouse, Rat Kidney Lysate showing detection of ~31 kDa HO-1 protein using Mouse Anti-HO-1 Monoclonal Antibody, Clone 6B8-2F2 (SMC-234). 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 (SMC-234) 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.

Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.