

## HO-1 (Rat) Antibody Catalog # ASM10467

### Specification

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#### HO-1 (Rat) Antibody - Product Information

Application	WB
Primary Accession	<a href="#">P06762</a>
Other Accession	<a href="#">NP_036712.1</a>
Host	Rabbit
Reactivity	Mouse, Rat
Clonality	Polyclonal

#### Description

Rabbit Anti-Rat HO-1 (Rat) Polyclonal

#### Target/Specificity

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

#### Other Names

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

#### Immunogen

Rat HO-1 without the transmembrane domain (cloned residues 1-262)

#### Purification

Protein A Purified

Storage -20°C

#### Storage Buffer

PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature Blue Ice or 4°C

#### Certificate of Analysis

1 µg/ml of SPC-207 was sufficient for detection of HO-1 in 10 µg of mixed human cell line lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

#### Cellular Localization

Microsome | Endoplasmic Reticulum

#### HO-1 (Rat) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

## **HO-1 (Rat) Antibody - Images**

### **HO-1 (Rat) Antibody - 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).

### **HO-1 (Rat) Antibody - References**

1. Froh M. et al. (2007) World J. Gastroenterol 13(25): 3478-86.
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: 411-419.
4. Brydun A., et al. (2007) Hypertens Res 30(4): 341-8.
5. Poss K.D. and Tnegawa S. (1997). Proc Natl Acad Sci U S A. 94: 10925-10930.
6. Yet S.F., et al. (2003) FASEB J. 17: 1759-1761.
7. Yachie A., et al. (1999) J Clin Invest. 103: 129-135.