10320 Camino Santa Fe, Suite A
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

HO-2 Antibody
Catalog # ASM10472

Specification

HO-2 Antibody - Product Information

Application	**WB, IHC, IP**
Primary Accession	P23711
Other Accession	NP_077363.1
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**

Description
Rabbit Anti-Rat HO-2 Polyclonal

Target/Specificity
Detects ~36kDa.

Other Names
Heme oxygenase 2 Antibody, Heme oxygenase (decycling) 2 Antibody, Heme oxygenase (decyclizing) 2 Antibody, HMOX 2 Antibody, HMOX2 Antibody, HMOX2_HUMAN Antibody, HO 2 Antibody, HO2 antibody

Immunogen
Rat native full-length HO-2 purified from testes

Purification
Protein A Purified

Storage	**-20ºC**

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

Shipping Temperature	**Blue Ice or 4ºC**

Certificate of Analysis
2 µg/ml of SPC-212 was sufficient for detection of HO-2 in 20 µg of Rat brain lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

Cellular Localization
Endoplasmic Reticulum | Microsome

HO-2 Antibody - Protocols

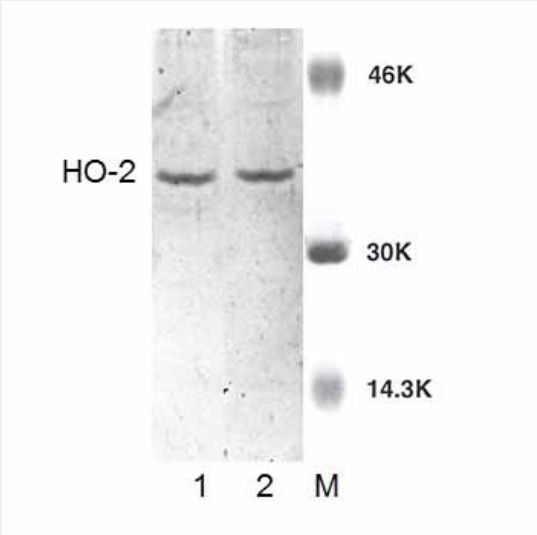
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence

- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HO-2 Antibody - Images

Immunohistochemistry analysis using Rabbit Anti-HO-2 Polyclonal Antibody (ASM10472). Tissue: Spinal cord. Species: Rat. Primary Antibody: Rabbit Anti-HO-2 Polyclonal Antibody (ASM10472) at 1:1000.



Western blot analysis of Rat Brain cell lysates showing detection of HO-2 protein using Rabbit Anti-HO-2 Polyclonal Antibody (ASM10472). Lane 1: Rat Brain lysate. Lane 2: Purified HO-2. Load: 10 µg. Primary Antibody: Rabbit Anti-HO-2 Polyclonal Antibody (ASM10472) at 1:1000.

HO-2 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-2 Antibody - References

1. Froh M. et al. (2007) World J. Gastroentereol 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.