HO-1 polyclonal antibody

Heme Oxygenase-1 (HO-1) also known as Hsp32, is the inducible isoform of heme oxygenase that catalyzes the NADPH, oxygen, and cytochrome P450 reductase dependent oxidation of heme to carbon monoxide, ferrous iron and biliverdin which is rapidly reduced to bilirubin. These products of the HO reaction have important physiological effects: carbon monoxide is a potent vasodilator and has been implicated to be a physiological regulator of cGMP and vascular tone; biliverdin and its product bilirubin are potent antioxidants; "free" iron increases oxidative stress and regulates the expression of many mRNAs (e.g., DCT-1, ferritin and transferring receptor) by affecting the conformation of iron regulatory protein (IRP)-1 and its binding to iron regulatory elements (IREs) in the 5'- or 3'- UTRs of the mRNAs. To date, three identified heme oxygenase isoforms are part of the HO system that catalyze heme into biliverdin and carbon monoxide. These are inducible HO-1 or Hsp32, constitutive HO-2 that is abundant in the brain and testis, and HO-3 which is related to HO-2 but is the product of a different gene. The HO system is the rate-limiting step in heme degradation and HO activity decreases the levels of heme which is a well known potent catalyst of lipid peroxidation and oxygen radical formation.

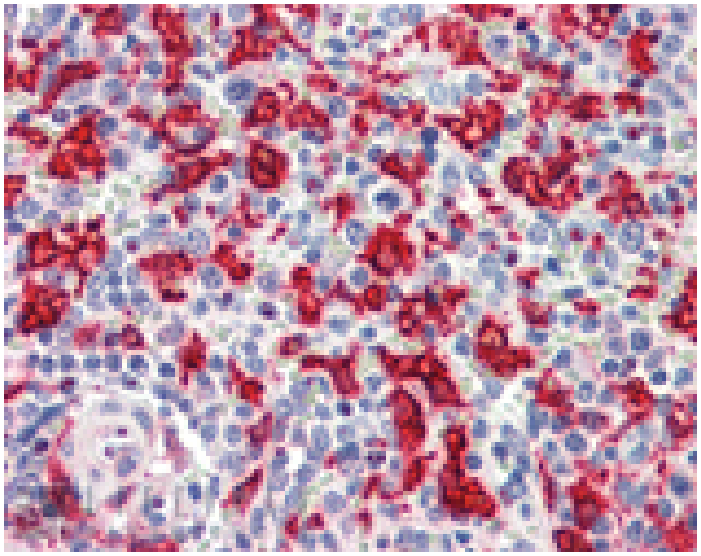
This antibody is covered by our Worry-Free Guarantee.

Citations: 37 View Online »

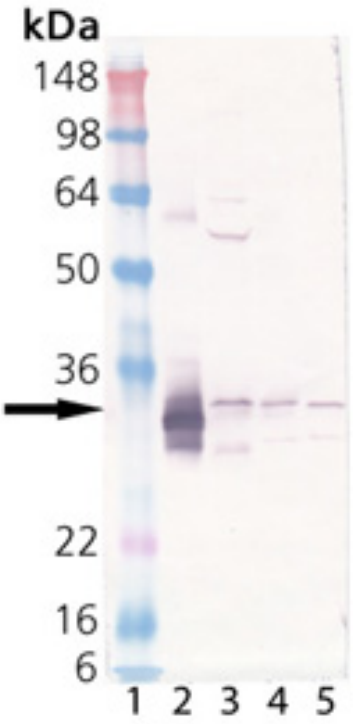
Ordering Information Order Online »

ADI-SPA-894-D	50µg
ADI-SPA-894-F	200µg

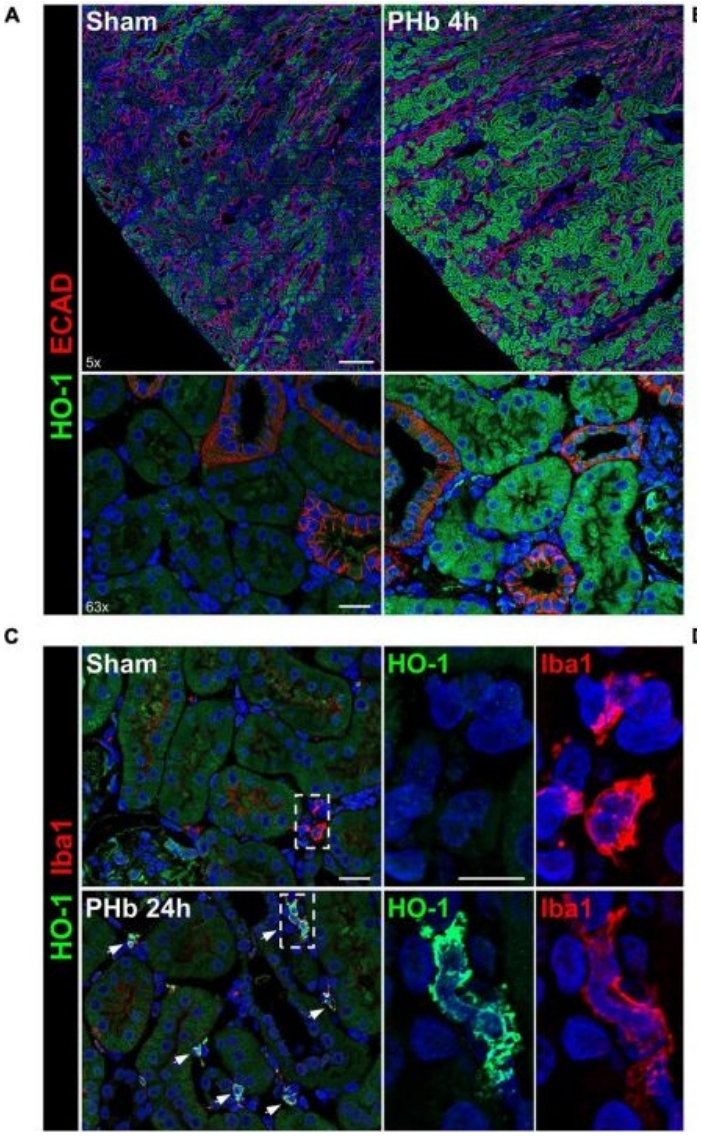
Manuals, SDS & CofA View Online »



Immunohistochemistry analysis of human spleen tissue stained with HO-1, pAb at 10µg/ml.



Western blot analysis of HO-1, pAb: Lane 1: MW Marker , Lane 2: HO-1 (human), (recombinant) (Product No. ADI-SPP-732), Lane 3: Human Liver Microsomes, Lane 4: Mouse Liver Microsomes, Lane 5: Rat Liver Microsomes.



PolyHeme induces HO-1 in proximal tubular epithelium and tubulointerstitial macrophages. (A) Representative low and high magnification images of immunofluorescence staining for HO-1 and E-cadherin in cortical renal sections from sham controls or PolyHeme (PHb)-infused animals 4 h post-infusion. (B) Semiquantitative image analysis of HO-1 immunofluorescence intensity in proximal tubule segments. For each renal section, the RFU values of 40–50 randomly outlined proximal tubule profiles were measured, averaged, and the mean RFU values for each group were calculated (n = 4–5 animals per group). (C) Dual staining for HO-1 and macrophage marker Iba1 in sham controls or PHb-infused animals 24 h post-infusion. White arrows depict colocalized expression of HO-1 in Iba1-positive tubulointerstitial macrophages. (D) Semiquantitative analysis of tubulointerstitial areas positively labeled with HO-1-expressing tubulointerstitial macrophages. The mean area values for each group are shown (n = 4–5 animals per group). Scale bars, 250 μm (5× A); 20 μm (63× A); 20 μm (C). *p ≤ 0.05; ***p ≤ 0.001; ns, no statistical significance.

Handling & Storage

Handling	Avoid freeze/thaw cycles.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	HMOX1, Hsp32, Heat shock protein 32, Heme oxygenase 1
Application	IHC, WB
Application Notes	Detects a band of ~32kDa by Western blot.
Formulation	Liquid. In PBS, pH 7.2, containing 50% glycerol and 0.09% sodium azide.
GenBank ID	X14782
Gene/Protein Identifier	3162 (Entrez GeneID), 141250 (OMIM)
Host	Rabbit
Immunogen	Recombinant human HO-1.
Purity Detail	Protein A affinity purified.
Recommendation Dilutions/Conditions	Western Blot (1:1,000, colormetric)Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Source	Purified from rabbit serum.
Species Reactivity	Dog, Guinea pig, Hamster, Human, Monkey, Mouse, Rabbit, Rat, Sheep
UniProt ID	P09601

Worry-free Guarantee

This antibody is covered by our Worry-Free Guarantee .

Last modified: May 29, 2024

ENZO LIFE SCIENCES, INC.
Phone: 800.942.0430
info-usa@enzolifesciences.com

European Sales Office
ENZO LIFE SCIENCES (ELS) AG
Phone: +41 61 926 8989
info-eu@enzolifesciences.com

Belgium, The Netherlands & Luxembourg
Phone: +32 3 466 0420
info-be@enzolifesciences.com

France
Phone: +33 472 440 655
info-fr@enzolifesciences.com

Germany
Phone: +49 7621 5500 526
info-de@enzolifesciences.com

UK & Ireland
Phone (UK customers): 0845 601 1488
Phone: +44 1392 825900
info-uk@enzolifesciences.com