

Product Specification Sheet

Heme Oxygenase-1 (HO-1) Antibodies

Cat. # HO12-M	Mouse Monoclonal Anti-Human HO-1 IgG # 2	SIZE: 100 ug
Cat. # HO12-C	Recombinant purified human HO-1 protein control for WB	SIZE: 100 ul

Heme oxygenase is the rate-limiting microsomal enzyme in the heme degradative pathway. Heme oxygenase catalyzes the NADPH, O₂ and cytochrome P450 reductase dependent oxidation of heme to form equimolar biliverdin, carbon monoxide, a putative neurotransmitter, and iron. These products of the HO reaction have important physiological effects: carbon monoxide is a potent vasodilator; 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 transferrin 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, 3 forms of **heme oxygenases (HO1-3)** have been identified. **HO-1 or Hsp-32** (EC 1.14.99.3; mouse/rat 289 aa; human 288 aa, chromosome 22; ~88% homology between the species) is an inducible enzyme. HO-1 expression has been shown to increase in benign prostatic hyperplasia (BPH) and malignant prostate tissue.

Source of Antigen and Antibodies

Antigen	30-aa peptide sequence (designated HO12-P or control peptide) within the N-terminus of human HO-1 (1) coupled to KLH
Ab Host/type	Mouse , monoclonal Aff pure IgG (cat # PTX32-M) purified over Protein A/G - agarose column
2-ab	Rabbit Anti- Mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Recombinant human HO-1 was expressed in E. coli and purified (>95%, ~32 kDa). Recombinant Human HO-1C protein for Western blot +ve control (**Cat # HO12-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **HO12-C** for good visibility with antibody Cat # **HO12-M**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **HO12-C** solution prior to heating and loading on gels.

This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Do not freeze, thaw, or heat repeatedly

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Storage

Short-term: unopened, undiluted liquid vials at -20oC and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1-10 ug/ml for aff. pure IgG using Chemiluminescence technique). HO-1 ~31-33 kDa.

ELISA (1:100K; using 50-100 ng control peptide/well).

Histochemistry & Immunofluorescence: Not tested

Specificity

HO12-M antibody does not cross-react with HO-2. Recognizes a band ~32 kDa in human, monkey, mouse, bovine, rat, and canine samples.

General References: (1). Muller Rm et al (1987) JBC 262, 6795-6802; Shibahara S et al (1985) PNAS 82, 7865-7869; Kageyama H et al (1988) Cancer Res. 48, 4795-4798; Alam J et al (1994) JBC 269, 1001-1009; Keyse SM et al (1989) PNAS 86, 99-103; Yoshida T et al (1988) Eur. J. Biochem. 171, 457-461; 171, 457-461

*This product is for in vitro research use only.

Some New Antibodies from ADI...

IRP1-2, HFE, Frataxin, Hepcidin, Hephaestin, NRAMPs, USF2, Ferritin, Light and heavy chains, ferritin and B2-M ELISA, Tfr1-2, ceruloplasmin, B2-Micro globulin,

HO12-M-C

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