Anti-Heme Oxygenase 1 (HO-1) Antibody [SP08-07] ET1604-45

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P, IP, FC, IF-Tissue
Molecular Wt:	Predicted band size: 33 kDa
Clone number:	SP08-07

Description: Heme oxygenases are microsomal enzymes that cleave heme to produce the antioxidant biliverdin, inorganic iron and carbon monoxide (CO). The activity of Heme Oxygenase 1 (HO-1), also designated HSP 32, is highly inducible in response to numerous stimuli, including heme, heavy metals, hormones and oxidative stress. Heme Oxygenase 2, in contrast, appears to be constituitively expressed in mammalian tissues. Heme Oxygenase 2 is involved in the production of carbon monoxide (CO) in brain, where CO is thought to act as a neurotransmitter. The CO signaling system closely parallels the signaling pathway involving nitric oxide, and regulation of the two systems is closely linked. Heme Oxygenase 3 is found in the spleen, liver, thymus, prostate, heart, kidney, brain and testis. A poor heme catalyst, Heme Oxygenase 3 has two heme regulatory motifs that may be involved in heme binding.

Immunogen: Synthetic peptide within Human HO-1 aa 227-276 / 288.

Positive control: Human spleen tissue, human liver tissue, Jurkat.

Subcellular location: Endoplasmic reticulum membrane.

Database links: SwissProt: P09601 Human

Recommended Dilutions:

WB	1:1,000
IHC-P	1:50-1:1,000
FC	1:500-1:1,000
IP	Use at an assay dependent concentration.
IF-Tissue	1:50-1:200

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

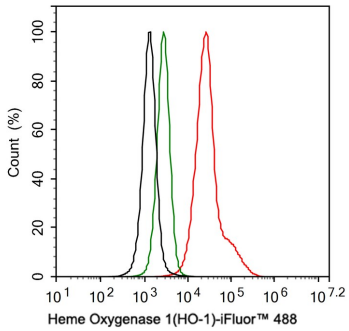

Fig1: Flow cytometric analysis of Jurkat cells labeling Heme Oxygenase 1 (HO-1).

Cells were fixed and permeabilized. Then stained with the primary antibody (ET1604-45, 1ug/ml) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

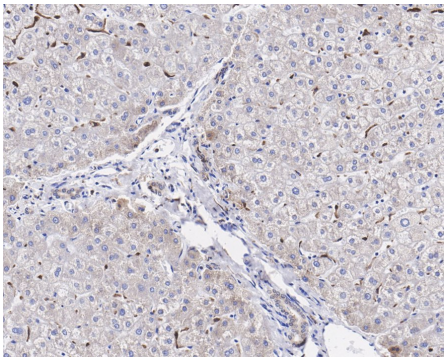

Fig2: Immunohistochemical analysis of paraffin-embedded human liver tissue with Rabbit anti-Heme Oxygenase 1 (HO-1) antibody (ET1604-45) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1604-45) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

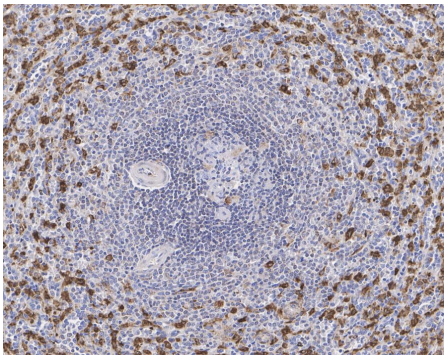

Fig3: Immunohistochemical analysis of paraffin-embedded human spleen tissue with Rabbit anti-Heme Oxygenase 1 (HO-1) antibody (ET1604-45) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1604-45) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. He C et al. Vasoprotective effect of PDGF-CC mediated by HMOX1 rescues retinal degeneration. Proc Natl Acad Sci U S A 111:14806-11 (2014).
2. Maruyama A et al. Non-coding RNA derived from the region adjacent to the human HO-1 E2 enhancer selectively regulates HO-1 gene induction by modulating Pol II binding. Nucleic Acids Res 42:13599-614 (2014).