PRODUCT INFORMATION

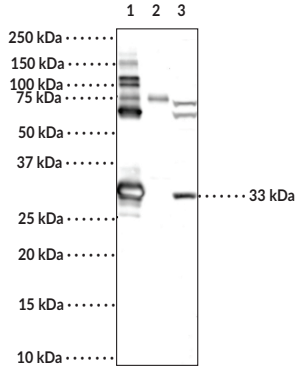
HO-1 (Hsp32) Polyclonal Antibody

Item No. 24633

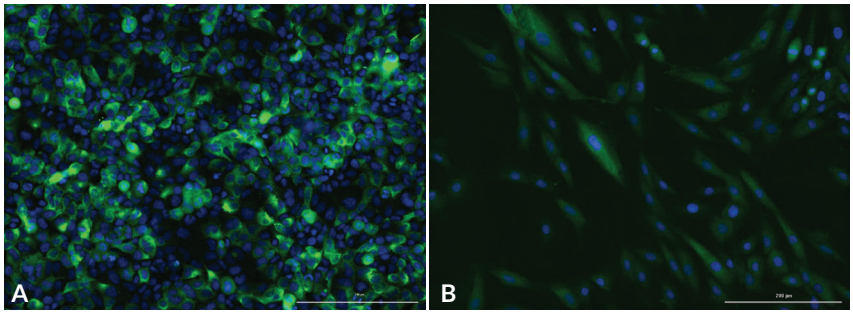
Overview and Properties

Contents:	This vial contains 500 µg of protein A-purified HO-1 (Hsp32) polyclonal antibody
Synonyms:	Heat Shock Protein 32, Heme Oxygenase-1, HMOX1
Immunogen:	Human recombinant HO-1 (Hsp32)
Species Reactivity:	(+) Human; other species not tested
Uniprot No.:	P09601
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	Rabbit
Applications:	ELISA, Immunofluorescence (IF), Immunohistochemistry (IHC), and Western blot (WB); the recommended starting concentrations for ELISA and WB is 1 and 5 µg/ml, respectively. The recommended starting dilution for IF and IHC is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

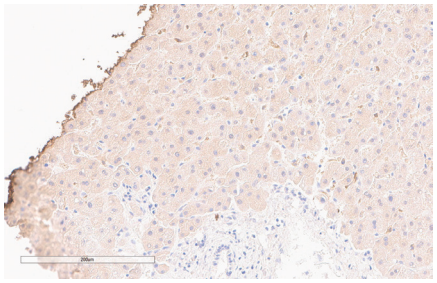
Images



Lane 1: HO-1 Recombinant Protein (0.1 µg)
Lane 2: HO-2 Recombinant Protein (0.1 µg) [negative control]
Lane 3: Jurkat Cell Lysate (50 µg)



Panel A: Immunofluorescent staining of Huh-7 (human liver) cells. HO-1 (Hsp32) Polyclonal Antibody at dilution of 1:200 followed by Goat Anti-Rabbit IgG FITC (Item No. 10006588) (green) and Hoechst nuclear stain (blue). *Panel B:* Immunofluorescent staining of H9C2 (rat myoblast) cells. HO-1 (Hsp32) Polyclonal Antibody at dilution of 1:200 followed by Goat Anti-Rabbit IgG FITC (Item No. 10006588) (green) and Hoechst nuclear stain (blue).



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human liver tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with HO-1 (Hsp32) Polyclonal Antibody, (Item No. 24633) at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

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PRODUCT INFORMATION

Description

Heme oxygenase-1 (HO-1), also known as heat shock protein 32 (Hsp32), is an inducible heme oxygenase encoded by the HMOX1 gene.[1-3] It is a membrane-bound enzyme that catalyzes the cleavage of heme to release carbon monoxide (CO), ferrous ions (Fe^{2+}), and biliverdin, with biliverdin being further processed into bilirubin. HO-1 is found in human spleen, liver, and kidney where its expression is induced by the presence of heme, hormones, metals, oxidative agents, and therapeutic compounds to protect against oxidative stress and inflammatory responses. HO-1 is upregulated in a variety of cancers and siRNA knockdown of *HMOX1* or inhibition of HO-1 decreases cancer cell proliferation.[4-6] HO-1 also interacts with the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) accessory protein Orf3a that, in a similar virus, SARS-CoV, is associated with activation of the NLRP3 inflammasome.[7-9] Cayman's HO-1 (Hsp32) Polyclonal Antibody can be used for ELISA, immunofluorescence (IF), immunohistochemistry (IHC), and Western blot (WB) applications. The antibody recognizes HO-1 (Hsp32) at approximately 32 kDa from human samples.

References

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