Anti-Catalase Antibody [4-G10]

M1501-6

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P, FC
Molecular Wt:	Predicted band size: 60kDa
Clone number:	4-G10

Description: Hydrogen peroxide is a harmful byproduct of many normal metabolic processes; to prevent damage to cells and tissues, it must be quickly converted into other, less dangerous substances. To this end, catalase is frequently used by cells to rapidly catalyze the decomposition of hydrogen peroxide into less-reactive gaseous oxygen and water molecules. Catalase is usually located in a cellular, bipolar environment organelle called the peroxisome. All known animals use catalase in every organ, with particularly high concentrations occurring in the liver. Catalase promotes growth of cells including T-cells, B-cells, myeloid leukemia cells, melanoma cells, mastocytoma cells and normal and transformed fibroblast cells.

Immunogen: Recombinant protein within human Catalase aa 475-527/527.

Positive control: Mouse liver lysates, human liver tissue, human liver cancer tissue, human kidney tissue, HepG2.

Subcellular location: Peroxisome

Database links: SwissProt: P04040 Human | P24270 Mouse | P04762 Rat

Recommended Dilutions:

IF-Cell	1:100
WB	1:2,000-1:5,000
IHC-P	1:100-1:400
FC	1:50

Storage Buffer: 1*PBS (pH7.4), 0.2% 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

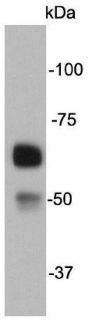

Fig1: Western blot analysis on mouse liver lysates using anti-catalse mouse mAb.

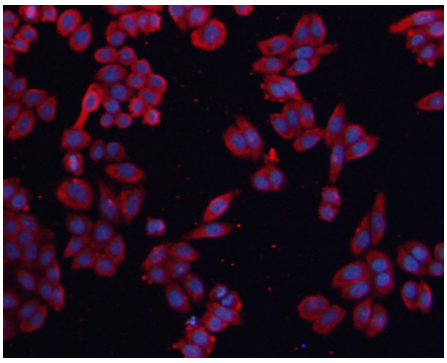

Fig2: ICC staining catalse in HepG2 cells (red). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

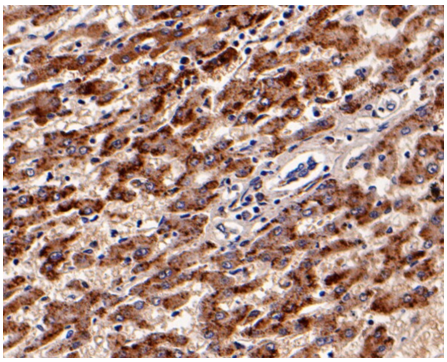

Fig3: Immunohistochemical analysis of paraffin-embedded human liver tissue with Mouse anti-Catalase antibody (M1501-6) at 1/400 dilution.

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 (M1501-6) at 1/400 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.

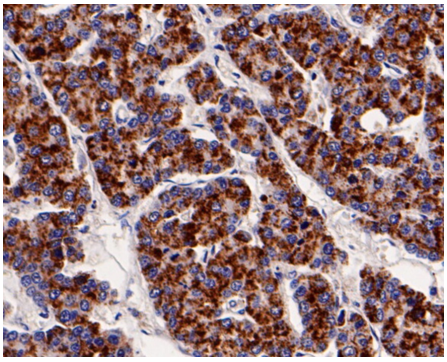

Fig4: Immunohistochemical analysis of paraffin-embedded human liver cancer tissue with Mouse anti-Catalase antibody (M1501-6) at 1/400 dilution.

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 (M1501-6) at 1/400 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.

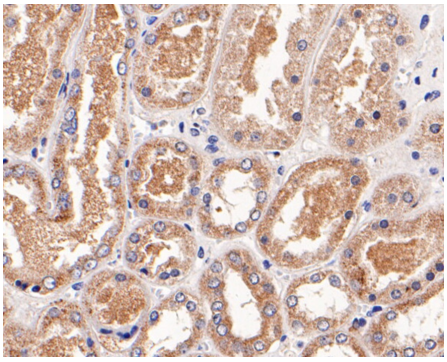

Fig5: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Mouse anti-Catalase antibody (M1501-6) at 1/100 dilution.

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 (M1501-6) at 1/100 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.

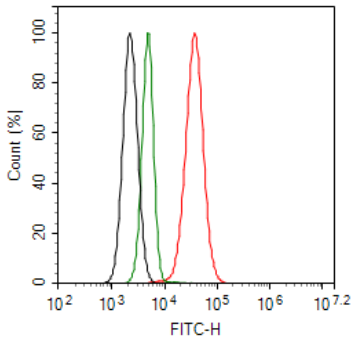

Fig6: Flow cytometric analysis of HepG2 cells labeling Catalase.

Cells were fixed and permeabilized. Then stained with the primary antibody (M1501-6, 1ug/ml) (red) compared with Mouse 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-Mouse IgG Secondary antibody (HA1125) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

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

Background References

1. Amo T, Atomi H, Imanaka T (June 2002). "Unique presence of a manganese catalase in a hyperthermophilic archaeon, Pyrobaculum calidifontis VA1". J. Bacteriol. 184 (12): 3305–3312.
2. Ho YS, Xiong Y, Ma W, Spector A, Ho D (2004). "Mice Lacking Catalase Develop Normally but Show Differential Sensitivity to Oxidant Tissue Injury". J Biol Chem 279 (31): 32804–32812.