Anti-LDHA Antibody [PSH13-58]

HA723547

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Cell, FC
Molecular Wt:	Predicted band size: 37 kDa
Clone number:	PSH13-58

Description: Lactate dehydrogenase A (LDHA) is an enzyme which in humans is encoded by the LDHA gene. It is a monomer of lactate dehydrogenase, which exists as a tetramer. The other main subunit is lactate dehydrogenase B (LDHB). Lactate dehydrogenase A catalyzes the inter-conversion of pyruvate and L-lactate with concomitant inter-conversion of NADH and NAD+. LDHA is found in most somatic tissues, though predominantly in muscle tissue and tumors, and belongs to the lactate dehydrogenase family. It has long been known that many human cancers have higher LDHA levels compared to normal tissues. It has also been shown that LDHA plays an important role in the development, invasion and metastasis of malignancies. Mutations in LDHA have been linked to exertional myoglobinuria.

Immunogen: Synthetic peptide within Human LDHA aa 1-50 / 332.

Positive control: HepG2 cell lysate, HeLa cell lysate, MCF7 cell lysate, A431 cell lysate, 293T cell lysate, PANC-1 cell lysate, U-87 MG cell lysate, MDA-MB-231 cell lysate, NIH/3T3 cell lysate, RAW264.7 cell lysate, Neuro-2a cell lysate, C2C12 cell lysate, C6 cell lysate, PC-12 cell lysate, human breast cancer tissue, human liver tissue, mouse heart tissue, mouse liver tissue, rat liver tissue, HeLa, C2C12, PC-12.

Subcellular location: Cytoplasm.

Database links: SwissProt: P00338 Human | P06151 Mouse | P04642 Rat

Recommended Dilutions:

WB	1:5,000-1:10,000
IHC-P	1:5,000-1:20,000
IF-Cell	1:500
FC	1:1,000

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

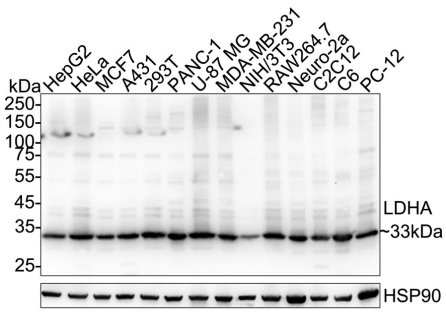

Fig1: Western blot analysis of LDHA on different lysates with Rabbit anti-LDHA antibody (HA723547) at 1/5,000 dilution.

Lane 1: HepG2 cell lysate (20 µg/Lane)
Lane 2: HeLa cell lysate (20 µg/Lane)
Lane 3: MCF7 cell lysate (20 µg/Lane)
Lane 4: A431 cell lysate (20 µg/Lane)
Lane 5: 293T cell lysate (20 µg/Lane)
Lane 6: PANC-1 cell lysate (20 µg/Lane)
Lane 7: U-87 MG cell lysate (20 µg/Lane)
Lane 8: MDA-MB-231 cell lysate (20 µg/Lane)
Lane 9: NIH/3T3 cell lysate (20 µg/Lane)
Lane 10: RAW264.7 cell lysate (20 µg/Lane)
Lane 11: Neuro-2a cell lysate (20 µg/Lane)
Lane 12: C2C12 cell lysate (20 µg/Lane)
Lane 13: C6 cell lysate (20 µg/Lane)
Lane 14: PC-12 cell lysate (20 µg/Lane)

Predicted band size: 37 kDa
Observed band size: 33 kDa

Exposure time: 6 seconds; ECL: K1801;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA723547) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

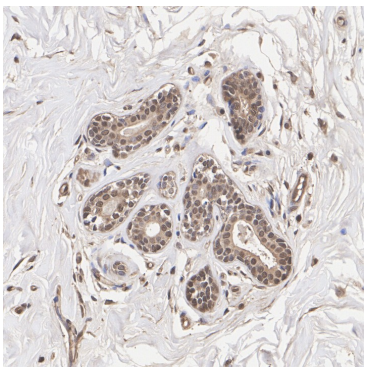

Fig2: Immunohistochemical analysis of paraffin-embedded human breast cancer tissue with Rabbit anti-LDHA antibody (HA723547) at 1/20,000 dilution.

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 (HA723547) at 1/20,000 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.

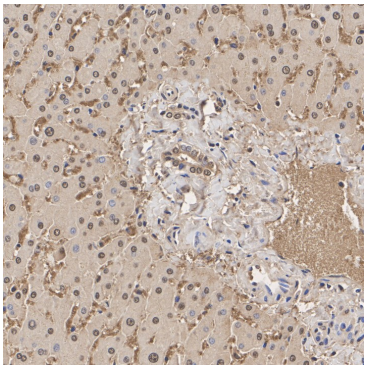

Fig3: Immunohistochemical analysis of paraffin-embedded human liver tissue with Rabbit anti-LDHA antibody (HA723547) at 1/5,000 dilution.

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 (HA723547) at 1/5,000 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.

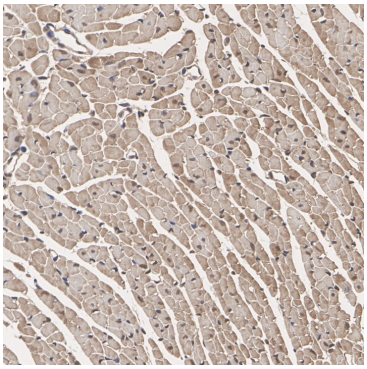

Fig4: Immunohistochemical analysis of paraffin-embedded mouse heart tissue with Rabbit anti-LDHA antibody (HA723547) at 1/5,000 dilution.

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 (HA723547) at 1/5,000 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.

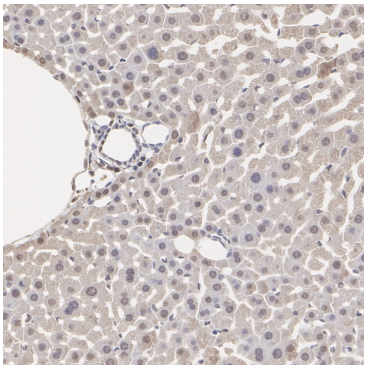

Fig5: Immunohistochemical analysis of paraffin-embedded mouse liver tissue with Rabbit anti-LDHA antibody (HA723547) at 1/20,000 dilution.

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 (HA723547) at 1/20,000 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.

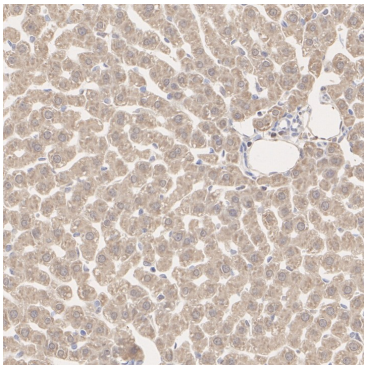

Fig6: Immunohistochemical analysis of paraffin-embedded rat liver tissue with Rabbit anti-LDHA antibody (HA723547) at 1/20,000 dilution.

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 (HA723547) at 1/20,000 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.

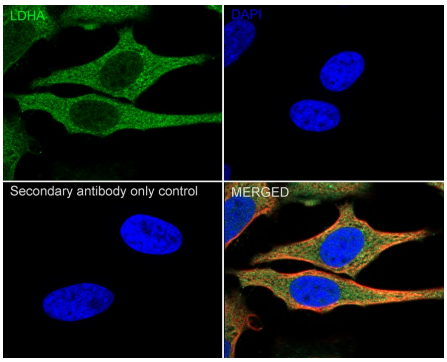

Fig7: Immunocytochemistry analysis of HeLa cells labeling LDHA with Rabbit anti-LDHA antibody (HA723547) at 1/500 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-LDHA antibody (HA723547) at 1/500 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (HA601187, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

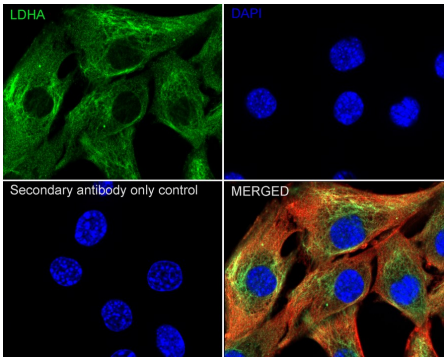

Fig8: Immunocytochemistry analysis of C2C12 cells labeling LDHA with Rabbit anti-LDHA antibody (HA723547) at 1/500 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-LDHA antibody (HA723547) at 1/500 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (HA601187, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

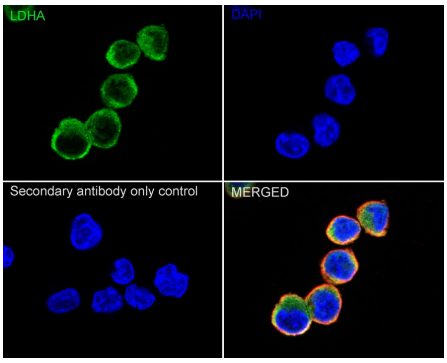

Fig9: Immunocytochemistry analysis of PC-12 cells labeling LDHA with Rabbit anti-LDHA antibody (HA723547) at 1/500 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-LDHA antibody (HA723547) at 1/500 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (HA601187, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

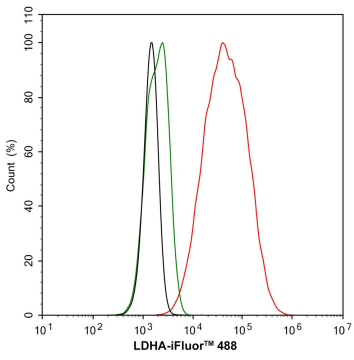

Fig10: Flow cytometric analysis of HeLa cells labeling LDHA.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA723547, 1/1,000) (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).

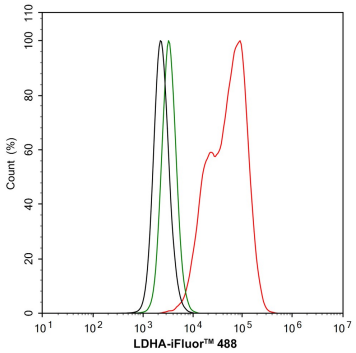

Fig11: Flow cytometric analysis of C2C12 cells labeling LDHA.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA723547, 1/1,000) (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).

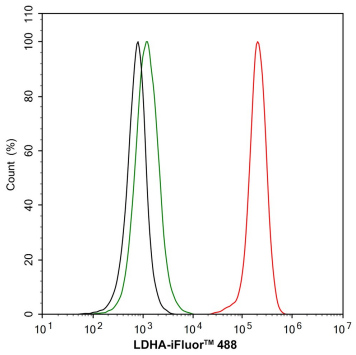

Fig12: Flow cytometric analysis of PC-12 cells labeling LDHA.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA723547, 1/1,000) (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).

Background References

1. Wang F et al. Canonical Wnt signaling promotes HSC glycolysis and liver fibrosis through an LDH-A/HIF-1alpha transcriptional complex. Hepatology. 2024 Mar
2. Zhang Y et al. LDH-A negatively regulates dMMR in colorectal cancer. Cancer Sci. 2021 Aug