

DESCRIPTION

Species Reactivity	Human/Rat
Specificity	Detects human LDHA in direct ELISAs and Western blots.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2066C
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human LDHA Ala2-Val92 Accession # P00338
Formulation	Supplied as a solution in PBS containing BSA, Glycerol and Sodium Azide. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

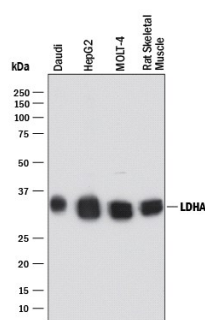
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below
Immunocytochemistry	3-25 µg/mL	See Below
Immunohistochemistry	3-25 µg/mL	See Below

DATA

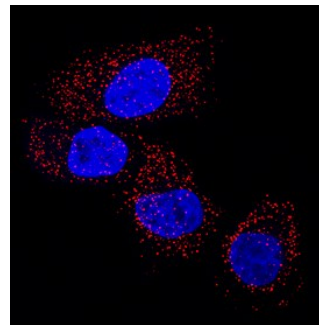
Western Blot



Detection of Human and Rat Lactate Dehydrogenase A/LDHA by Western Blot.

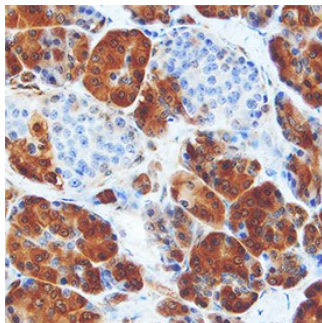
Western blot shows lysates of Daudi human Burkitt's lymphoma cell line, HepG2 human hepatocellular carcinoma cell line, MOLT-4 human acute lymphoblastic leukemia cell line, and rat skeletal muscle tissue. PVDF membrane was probed with 0.2 µg/mL of Rabbit Anti-Human/Rat Lactate Dehydrogenase A/LDHA Monoclonal Antibody (Catalog # MAB9158) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for Lactate Dehydrogenase A/LDHA at approximately 34-36 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



Lactate Dehydrogenase A/LDHA in PC-3 Human Cell Line. Lactate Dehydrogenase A/LDHA was detected in immersion fixed PC-3 human prostate cancer cell line using Rabbit Anti-Human/Rat Lactate Dehydrogenase A/LDHA Monoclonal Antibody (Catalog # MAB9158) at 3 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunohistochemistry



Lactate Dehydrogenase A/LDHA in Human Pancreas. Lactate Dehydrogenase A/LDHA was detected in immersion fixed paraffin-embedded sections of human pancreas using Rabbit Anti-Human/Rat Lactate Dehydrogenase A/LDHA Monoclonal Antibody (Catalog # MAB9158) at 3 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to exocrine cells. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C, as supplied. ● 1 month, 2 to 8 °C under sterile conditions after opening. ● 6 months, -20 to -70 °C under sterile conditions after opening.

BACKGROUND

LDHA (lactate dehydrogenase A chain; also LDH-M and PIG-19) is a 34-36 kDa member of the LDH family of enzymes. It is a part of a cytoplasmic complex that is found principally in hepatocytes and skeletal muscle. The LDHA complex catalyzes the conversion of pyruvate to lactate, thereby generating NAD, the final step in anaerobic glycolysis. This NAD is essential for the subsequent generation of ATP. Human LDHA is 332 amino acids (aa) in length. It contains an N-terminal coenzyme binding region, a central catalytic site, and at least nine utilized Lys acetylation and two Tyr phosphorylation sites. It also undergoes ISGylation where a 17 kDa product of the ISG15 gene is covalently attached to LDHA in a ubiquitin-like manner. LDHA forms tetramers composed of two dimers of varying composition. The tetramer may be homotetrameric (four monomers), or contain from one to three substitute LDHB monomers typically found in heart muscle. There are multiple splice variants. One possesses a five aa substitution for aa 237-332, a second contains a 45 aa substitution for aa 230-332, a third shows a deletion of aa 82-139, while a fourth utilizes an alternative start site 29 aa upstream of the standard site. Over aa 2-92, human LDHA shares 93% aa sequence identity with mouse LDHA.

PRODUCT SPECIFIC NOTICES

* Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to SDS for additional information and handling instructions.