

# LDH-D (H-10): sc-374128

## BACKGROUND

The lactate dehydrogenase family (LDH) consists of three members, designated LDH-A, LDH-B and LDH-C, all of which work in concert to catalyze the final step of anaerobic glycolysis, namely the conversion of L-lactate and NAD<sup>+</sup> to pyruvate and NADH. Each family member displays a specific tissue distribution pattern, with LDH-A present in muscle and LDH-B present in heart, while LDH-C expression is confined to testis and sperm. A fourth possible member, termed LDH-D (lactate dehydrogenase D), probable D-lactate dehydrogenase or DLD, is a 507 amino acid mitochondrial protein belonging to the D-isomer specific 2-hydroxyacid dehydrogenase family. Existing as two alternatively spliced isoforms, LDH-D is moderately expressed in liver and heart with lower levels found in kidney and skeletal muscle.

## CHROMOSOMAL LOCATION

Genetic locus: LDHD (human) mapping to 16q23.1; Ldhd (mouse) mapping to 8 E1.

## SOURCE

LDH-D (H-10) is a mouse monoclonal antibody raised against amino acids 1-195 mapping at the N-terminus of LDH-D of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LDH-D (H-10) is available conjugated to agarose (sc-374128 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374128 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374128 PE), fluorescein (sc-374128 FITC), Alexa Fluor® 488 (sc-374128 AF488), Alexa Fluor® 546 (sc-374128 AF546), Alexa Fluor® 594 (sc-374128 AF594) or Alexa Fluor® 647 (sc-374128 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374128 AF680) or Alexa Fluor® 790 (sc-374128 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

LDH-D (H-10) is recommended for detection of LDH-D of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LDH-D siRNA (h): sc-93282, LDH-D siRNA (m): sc-146691, LDH-D shRNA Plasmid (h): sc-93282-SH, LDH-D shRNA Plasmid (m): sc-146691-SH, LDH-D shRNA (h) Lentiviral Particles: sc-93282-V and LDH-D shRNA (m) Lentiviral Particles: sc-146691-V.

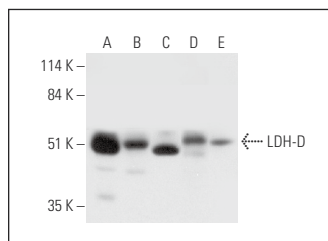
Molecular Weight of LDH-D: 55 kDa.

Positive Controls: human skeletal muscle extract: sc-363776, human heart extract: sc-363763 or mouse heart extract: sc-2254.

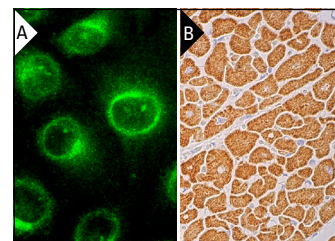
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



LDH-D (H-10): sc-374128. Western blot analysis of LDH-D expression in human heart (A), mouse heart (B), human skeletal muscle (C) and mouse skeletal muscle (D) tissue extracts and LADMAC whole cell lysate (E).



LDH-D (H-10): sc-374128. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (B).

## SELECT PRODUCT CITATIONS

- Wang, H.Q., et al. 2019. Increased autocrine interleukin-6 production is significantly associated with worse clinical outcome in patients with chronic lymphocytic leukemia. *J. Cell. Physiol.* 234: 13994-14006.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.