LDH (H-10): sc-133123

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

The lactate dehydrogenase family (LDH) catalyzes the final step of anaerobic glycolysis, the conversion of L-lactate and NAD to pyruvate and NADH. The LDH family consists of three members, LDH-A, LDH-B and LDH-C, all of which form tetramers consisting of four subunits. However, each family member displays a specific tissue distribution pattern with LDH-A and LDH-B predominant in several tissues, specifically LDH-A in muscle and LDH-B in heart, while LDH-C expression is confined to the testis and sperm. LDHs function as powerful markers for germ cell tumors. The genes encoding human LDH-A and LDH-C map to chromosome 11, while the human LDH-B gene maps to chromosome 12. Deficiency in the LDH-A gene is linked to exertional myoglobinuria.

CHROMOSOMAL LOCATION

Genetic locus: LDHA/LDHC (human) mapping to 11p15.1, LDHB (human) mapping to 12p12.1; Ldha/Ldhc (mouse) mapping to 7 B4, Ldhb (mouse) mapping to 6 G2.

SOURCE

LDH (H-10) is a mouse monoclonal antibody raised against amino acids 173-332 mapping at the C-terminus of LDH-A of human origin.

PRODUCT

Each vial contains 200 µg IgG$_{2a}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LDH (H-10) is available conjugated to agarose (sc-133123 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-133123 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133123 PE), fluorescein (sc-133123 FITC), Alexa Fluor® 488 (sc-133123 AF488), Alexa Fluor® 546 (sc-133123 AF546), Alexa Fluor® 594 (sc-133123 AF594) or Alexa Fluor® 647 (sc-133123 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-133123 AF680) or Alexa Fluor® 790 (sc-133123 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

LDH (H-10) is recommended for detection of LDH-A, LDH-B, LDH-C, LDH-A-like 6A and LDH-A-like 6B 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).

Molecular Weight of LDH: 35 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, Neuro-2A whole cell lysate: sc-364185 or Sol8 cell lysate: sc-2249.
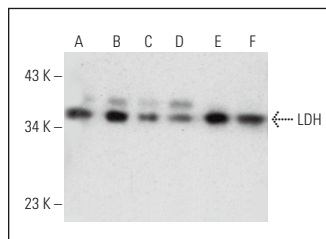
RESEARCH USE

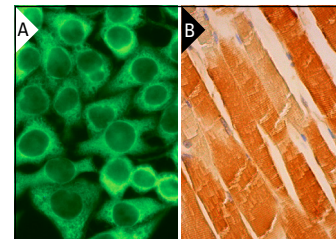For research use only, not for use in diagnostic procedures.

STORAGE

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

DATA

LDH (H-10): sc-133123. Western blot analysis of LDH expression in c4 (**A**), Neuro-2A (**B**), Sol8 (**C**), F9 (**D**), C6 (**E**) and A-10 (**F**) whole cell lysates.

LDH (H-10): sc-133123. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (**B**).

SELECT PRODUCT CITATIONS

1. Ohtani-Kaneko, R., et al. 2010. Effects of estrogen on synapsin I distribution in developing hypothalamic neurons. Neurosci. Res. 66: 180-188.

2. Groessl, M., et al. 2011. Cellular uptake and subcellular distribution of ruthenium-based metallodrugs under clinical investigation versus cisplatin. Metallomics 3: 591-599.

3. Koziel, A., et al. 2012. The influence of high glucose on the aerobic metabolism of endothelial EA.hy926 cells. Pflugers Arch. 464: 657-669.

4. McCleland, M.L., et al. 2013. Lactate dehydrogenase B is required for the growth of KRAS-dependent lung adenocarcinomas. Clin. Cancer Res. 19: 773-784.

5. López-Farré, A.J., et al. 2014. Effects of factor Xa on the expression of proteins in femoral arteries from type 2 diabetic patients. Br. J. Clin. Pharmacol. 78: 1366-1377.

6. Bennett, S.J., et al. 2015. CD4+ T cell surface α enolase is lower in older adults. Mech. Ageing Dev. 152: 56-62.

7. Buckingham, E.M., et al. 2016. Exocytosis of varicella-zoster virus virions involves a convergence of endosomal and autophagy pathways. J. Virol. 90: 8673-8685.

8. Koziel, A. and Jarmuszkiewicz, W. 2017. Hypoxia and aerobic metabolism adaptations of human endothelial cells. Pflugers Arch. 469: 815-827.

9. Pansarasa, O., et al. 2018. ALS lymphoblastoid cell lines as a considerable model to understand disease mechanisms. Dis. Model. Mech. 11: dmm031625.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.