SANTA CRUZ BIOTECHNOLOGY, INC.

LDH (H-160): sc-33781

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 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.

REFERENCES

1. Edwards, Y.H., et al. 1987. Locus determining the human sperm-specific lactate dehydrogenase, LDHC, is syntenic with LDHA. Dev. Genet. 8: 219-232.
2. LeVan, K.M. and Goldberg, E. 1991. Properties of human testis-specific lactate dehydrogenase expressed from *Escherichia coli*. Biochem. J. 273: 587-592.

SOURCE

LDH (H-160) is a rabbit polyclonal 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 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

LDH (H-160) is recommended for detection of LDH-A, B, C and LDH-A-like 6A and 6B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

LDH (H-160) is also recommended for detection of LDH-A, B, C and LDH-A-like 6A and 6B in additional species, including equine, canine, bovine and porcine.

Molecular Weight of LDH: 35 kDa.

Positive Controls: mouse testis extract: sc-2405, SJRH30 cell lysate: sc-2287 or LADMAC whole cell lysate: sc-364189.

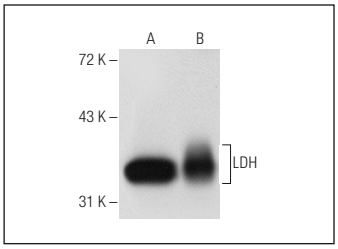
STORAGE

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

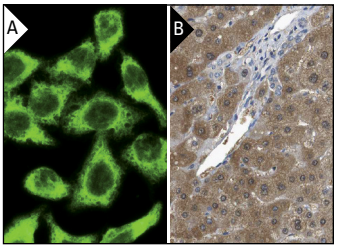
RESEARCH USE

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

DATA



LDH (H-160): sc-33781. Western blot analysis of LDH expression in 293T whole cell lysate (**A**) and mouse testis tissue extract (**B**).



LDH (H-160): sc-33781. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Ahn, K.S., et al. 2008. Simvastatin, 3-hydroxy-3-methylglutaryl coenzyme A reductase inhibitor, suppresses osteoclastogenesis induced by receptor activator of nuclear factor-κB ligand through modulation of NFκB pathway. Int. J. Cancer 123: 1733-1740.
2. Tosoni, K., et al. 2013. CFTR mutations altering CFTR fragmentation. Biochem. J. 449: 295-305.
3. Lalioti, V.S., et al. 2013. C6orf89 encodes three distinct HDAC enhancers that function in the nucleolus, the Golgi and the midbody. J. Cell. Physiol. 228: 1907-1921.
4. Desideri, E., et al. 2014. MAPK14/p38α-dependent modulation of glucose metabolism affects ROS levels and autophagy during starvation. Autophagy 10: 1652-65.
5. Baldelli, S., et al. 2014. PGC-1α buffers ROS-mediated removal of mitochondria during myogenesis. Cell Death Dis. 5: e1515.
6. Adhikary, T., et al. 2015. The transcriptional PPARβ/δ network in human macrophages defines a unique agonist-induced activation state. Nucleic Acids Res. 43: 5033-5051.
7. Schumann, T., et al. 2015. Deregulation of PPARβ/δ target genes in tumor-associated macrophages by fatty acid ligands in the ovarian cancer microenvironment. Oncotarget 6: 13416-13433.
8. Ajayi, A., et al. 2015. Altered p53 and NOX1 activity cause bioenergetic defects in a SCA7 polyglutamine disease model. Biochim. Biophys. Acta 1847: 418-428.