

LDH (V-17): sc-27232

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.

REFERENCES

- Edwards, Y.H., et al. 1987. Locus determining the human sperm-specific lactate dehydrogenase, LDH-C, is syntenic with LDH-A. *Dev. Genet.* 8: 219-232.
- LeVan, K.M., et al. 1991. Properties of human testis-specific lactate dehydrogenase expressed from *Escherichia coli*. *Biochem. J.* 273: 587-592.
- Kanno, T., et al. 1995. Lactate dehydrogenase M-subunit deficiencies: clinical features, metabolic background, and genetic heterogeneities. *Muscle Nerve* 3: 54-60.
- Kopperschlager, G., et al. 1996. Methods for the separation of lactate dehydrogenases and clinical significance of the enzyme. *J. Chromatogr. B, Biomed. Appl.* 684: 25-49.

CHROMOSOMAL LOCATION

Genetic locus: LDHA/LDHC (human) mapping to 11p15.1, LDHB (human) mapping to 12p12.2; Ldha/Ldhc (mouse) mapping to 7 B4, Ldhb (mouse) mapping to 6 G2.

SOURCE

LDH (V-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-27232 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

LDH (V-17) is recommended for detection of LDH-A, LDH-B and LDH-C 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LDH (V-17) is also recommended for detection of LDH-A, LDH-B and LDH-C in additional species, including equine, canine, bovine, porcine and avian.

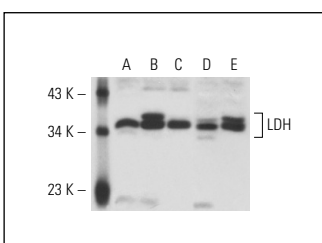
Molecular Weight of LDH: 35 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, F9 cell lysate: sc-2245 or SJRH30 cell lysate: sc-2287.

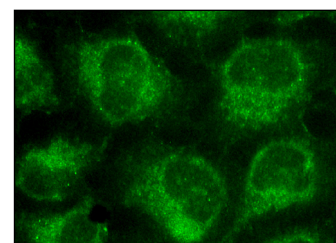
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



LDH (V-17): sc-27232. Western blot analysis of LDH expression in LADMAC (A), SK-N-SH (B), SJRH30 (C), F9 (D) and HS 181 Tes (E) whole cell lysates.



LDH (V-17): sc-27232. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Naryzhny, S.N. 2009. Blue Dry Western: simple, economic, informative, and fast way of immunodetection. *Anal. Biochem.* 392: 90-95.

RESEARCH USE

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

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Try **LDH (H-10): sc-133123**, our highly recommended monoclonal alternative to LDH (V-17). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **LDH (H-10): sc-133123**.