

# LDH-C (S-18): sc-27239

## 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 140 kDa tetramers consisting of four 35 kDa 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 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., et al. 1991. Properties of human testis-specific lactate dehydrogenase expressed from *Escherichia coli*. *Biochem. J.* 273: 587-592.
3. Kanno, T., et al. 1995. Lactate dehydrogenase M-subunit deficiencies: clinical features, metabolic background, and genetic heterogeneities. *Muscle Nerve* 3: 54-60.
4. 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.
5. Auerbach, G., et al. 1998. Lactate dehydrogenase from the hyperthermophilic bacterium *Thermotoga maritima*: the crystal structure at 2.1 Å resolution reveals strategies for intrinsic protein stabilization. *Structure* 6: 769-781.
6. Niwakawa, M., et al. 2001. The role of tumor markers in the treatment of germ cell tumor. *Gan To Kagaku Ryoho* 28: 1159-1165.

## CHROMOSOMAL LOCATION

Genetic locus: LDHC (human) mapping to 11p15.5-p15.3; Ldh3 (mouse) mapping to 7 B3.

## SOURCE

LDH-C (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LDH-C of rat 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-27239 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.

## APPLICATIONS

LDH-C (S-18) is recommended for detection of LDH-C of rat and, to a lesser extent, mouse 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); non cross-reactive with LDH-A and LDH-B.

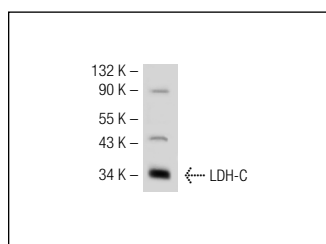
Molecular Weight of LDH-C: 35 kDa.

Positive Controls: mouse testis extract: sc-2405.

## 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-C (S-18): sc-27239. Western blot analysis of LDH-C expression in mouse testis tissue extract.

## 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) or our catalog for detailed protocols and support products.



Try **LDH-C (F-1): sc-377305** or **LDH-C (D-9): sc-374097**, our highly recommended monoclonal alternatives to LDH-C (S-18).