

LDHA Antibody

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID # 3939
Swiss-Prot Acc. # P00338

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R, Mk	37 kDa	Rabbit**

Background: Lactate dehydrogenase (LDH) catalyzes the interconversion of pyruvate and NADH to lactate and NAD⁺. When the oxygen supply is too low for mitochondrial ATP production, this reaction recycles NADH generated in glycolysis to NAD⁺, which refeeds into glycolysis. In muscle cells, the major form of LDH is the isozyme A (LDHA). The LDHA promoter contains HIF-1- α binding sites (1). Under hypoxic conditions, the expression of LDHA is induced (2). During intensive and prolonged muscle exercise, lactate accumulates in muscle cells when the supply of oxygen does not meet demand. When oxygen levels return to normal, LDH converts lactate to pyruvate to generate ATP in the mitochondrial electron transport chain.

Specificity/Sensitivity: LDHA Antibody detects endogenous levels of total LDHA protein.
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence of human LDHA. Antibodies are purified by peptide affinity chromatography.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

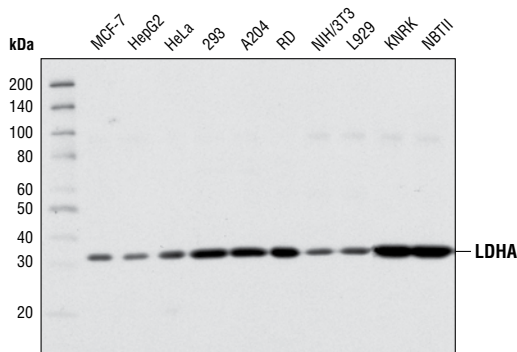
*Species cross-reactivity is determined by western blot.
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:
Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:
(1) Semenza, G.L. et al. (1996) *J Biol Chem* 271, 32529-37.
(2) Semenza, G.L. (2007) *Biochem J* 405, 1-9.



Western blot analysis of extracts from various cell types using LDHA Antibody.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.