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#3582

LDHA (C4B5) Rabbit mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IHC-P, IF-IC, FC-FP	Reactivity: H Mk	Sensitivity: Endogenous	MW (kDa): 37	Source/Isotype: Rabbit IgG	UniProt ID: #P00338	Entrez-Gene Id: 3939
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Product Usage Information

Application

Western Blotting
Immunohistochemistry (Paraffin)
Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:200 - 1:800
1:100 - 1:400
1:50 - 1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #43723.

Specificity/Sensitivity

LDHA (C4B5) Rabbit mAb detects endogenous levels of total LDHA protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human LDHA.

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 reenters glycolysis. The major form of LDH found in muscle cells is the A (LDHA) isozyme. The LDHA promoter contains HIF-1α binding sites (1). LDHA expression is induced under hypoxic conditions (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.

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human **Mk:** Monkey

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