

Anti-LDHD Antibody Picoband®

Catalog Number: A11154-1

About LDHD

Two naturally occurring forms of lactate dehydrogenase with similar but unique substrate specificities have been isolated in lower organisms including invertebrates, fungi, and prokaryotes. These dehydrogenase enzymes are L-lactate dehydrogenase and D-lactate dehydrogenase (LDHD) that are specific to the L and D isomers of lactate, respectively (PMID: 12127981). In lactic acid bacteria, LDHD plays a key role in anaerobic energy metabolism (PMID: 497162). Despite the identification of D-lactate and other D-2-hydroxyacids in prokaryotes, and the obvious connections and similarities to vertebrate metabolic pathways, very few mammalian D-2-hydroxyacid dehydrogenases have been found. LDHD has 2 isoforms with the molecular weight of 52 and 54kDa, and can be detected as 45-54 kDa.

Overview

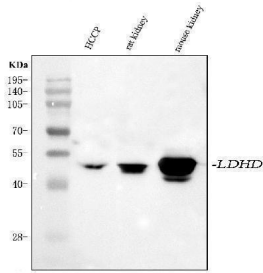
Product Name	Anti-LDHD Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-LDHD Antibody Picoband® catalog # A11154-1. Tested in ELISA, WB, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	Q86WU2

Technical Details

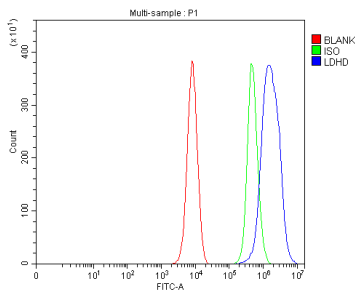
Immunogen	E.coli-derived human LDHD recombinant protein (Position: R56-Q498).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross reactivity with other proteins.
Isotype	IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human, Mouse, Rat Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5 ug/ml, -

Anti-LDHD Antibody Picoband® (A11154-1) Images



Western blot analysis of LDHD using anti-LDHD antibody (A11154-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human hepatocellular carcinoma paracancerous tissue (HCCP) lysates, Lane 2: rat kidney tissue lysates, Lane 3: mouse kidney tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-LDHD antigen affinity purified polyclonal antibody (Catalog # A11154-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for LDHD at approximately 45-50 kDa. The expected band size for LDHD is at 55 kDa.



Flow Cytometry analysis of K562 cells using anti-LDHD antibody (A11154-1). Overlay histogram showing K562 cells stained with A11154-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-LDHD Antibody (A11154-1, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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Anti-LDHD Antibody

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