abcam

ab135396

Anti-Lactate Dehydrogenase antibody [98A-1F9BB1]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.3 Preservative: 0.02% Sodium azide Constituents: 0.877% Sodium chloride, 0.357% HEPES
Form	Liquid
Clonality	Monoclonal
Clone number	98A-1F9BB1
Purification technique	Precipitation Ammonium Sulphate
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

Expected

Species	Mouse, Rat, Rabbit
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Cow
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

Expected

Species	Mouse, Rat, Rabbit
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Cow
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1 µg/mL

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, Rat, Rabbit
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Cow
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Mouse
Dilution info	1 µg/mL
Notes	-

Species	Rat
Dilution info	1 µg/mL
Notes	-

Species	Human
Dilution info	1 µg/mL
Notes	-

Species	Rabbit
Dilution info	1 µg/mL
Notes	-

Not recommended

Species	Cow
Dilution info	-
Notes	-

In-Cell ELISA

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

Expected

Species	Mouse, Rat, Rabbit
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Cow
Dilution info	-
Notes	-

Target data

See full target information LDHA

Function	Interconverts simultaneously and stereospecifically pyruvate and lactate with concomitant interconversion of NADH and NAD(+).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Avoid freeze / thaw cycle

Notes

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Lactate dehydrogenase (LDH) is an enzyme that catalyzes the interconversion of pyruvate and lactate along with the conversion of NADH to NAD+. LDH is known by other names such as lactic acid dehydrogenase and LDH-5. The enzyme has a molecular weight of approximately 36 kDa. LDH exists in almost all tissues having multiple isoforms that are expressed differently depending on the tissue type. It shows high expression in muscle tissue liver and heart indicating its extensive role in energy metabolism.
Biological function summary	Lactate dehydrogenase plays a critical role in anaerobic glycolysis. The enzyme helps in regenerating NAD+ from NADH allowing glycolysis to continue in the absence of oxygen. LDH is not a part of any larger protein complex working independently to fulfill its function in the glycolytic pathway. It serves in rapid energy production especially under hypoxic or exertional conditions where oxygen supply is limited.
Pathways	LDH is significantly involved in the glycolysis and gluconeogenesis pathways. Within glycolysis LDH helps facilitate the conversion of pyruvate to lactate during anaerobic conditions a step important for ATP production when oxygen is scarce. The enzyme is tied closely to phosphofructokinase-1 (PFK-1) in glycolysis given that both enzymes are central to maintaining the glycolytic flow. In gluconeogenesis though functionally reversed from its role in glycolysis LDH helps to manage lactate removal an important step for glucose synthesis from non-carbohydrate sources.

Associated diseases and disorders	Lactate dehydrogenase levels often act as a biomarker for tissue damage or certain cancers as its release into the bloodstream signals cellular injury or death. Elevated LDH levels are associated with conditions like myocardial infarction and certain forms of anemia. In cancer such as lymphoma or leukemia LDH correlates with the progression of the disease and acts as a prognostic marker. LDH's connection to these conditions often leads to insights into disease severity and progression due to its association with proteins like p53 and HIF-1 which play roles in cellular metabolism and hypoxia response.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

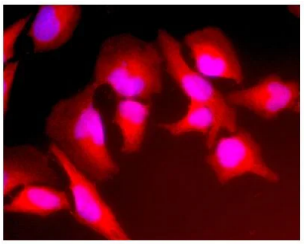
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

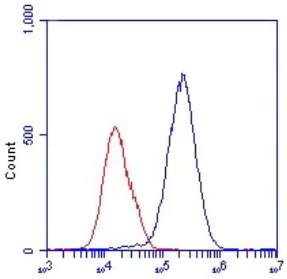
5 product images



Immunocytochemistry - Anti-Lactate Dehydrogenase antibody [98A-1F9BB1] (ab135396)

Lactate Dehydrogenase Immunocytochemistry staining using mouse Anti-Lactate Dehydrogenase antibody

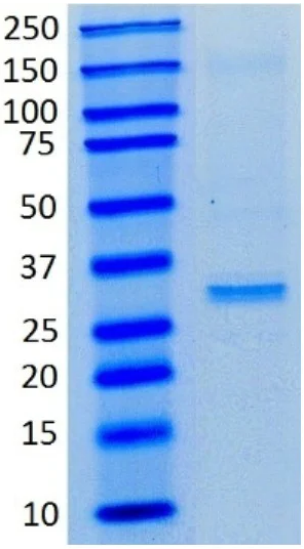
Immunocytochemistry analysis of Paraformaldehyde fixed Hela cells labelling Lactate Dehydrogenase with ab135396 at 1 µg/ml. Detection utilised Alexa 594 goat anti-mouse IgG (H+L) used at 1/1000 dilution.



Flow Cytometry - Anti-Lactate Dehydrogenase antibody [98A-1F9BB1] (ab135396)

Lactate Dehydrogenase Flow Cytometry staining using mouse Anti-Lactate Dehydrogenase antibody

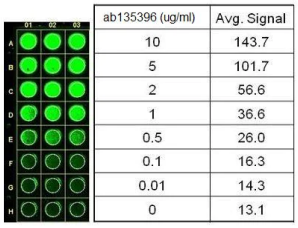
Flow cytometric analysis of HeLa cells (fixed and permeabilized with methanol) labelling Lactate Dehydrogenase with ab135396 at 1 µg/ml (blue) or an equal amount of an isotype control antibody (red). 1% BSA was used as the blocking reagent for all the blocking steps.



Immunoprecipitation - Anti-Lactate Dehydrogenase antibody [98A-1F9BB1] (ab135396)

Immunoprecipitation of Lactate Dehydrogenase from 1mg of Hela Cell Lysate with ab135396 at 1 µg/ml. The gel was stained with Coomassie brilliant blue G.
All lanes:
Immunoprecipitation - Anti-Lactate Dehydrogenase antibody [98A-1F9BB1] (ab135396)

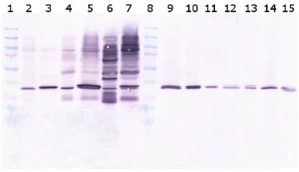
Predicted band size: 37 kDa



ab135396 (ug/ml)	Avg. Signal
10	143.7
5	101.7
2	56.6
1	36.6
0.5	26.0
0.1	16.3
0.01	14.3
0	13.1

In-Cell ELISA - Anti-Lactate Dehydrogenase antibody [98A-1F9BB1] (ab135396)

In-cell ELISA analysis of paraformaldehyde/PBS fixed HeLa cells seeded at 20k cells/well. ab135396 was serially diluted in 1%BSA/PBS and detected with goat anti-mouse dye-conjugated antibody at 1/1000 in 1%BSA/PBS.



Western blot - Anti-Lactate Dehydrogenase antibody [98A-1F9BB1] (ab135396)

The high background signal in mouse tissue sample was caused by the direct reaction between the mouse IgG in mouse tissue preps and the goat anti-mouse secondary antibody. LDHA and LDHB are resolved in tissues containing both isoforms.
All lanes:
Western blot - Anti-Lactate Dehydrogenase antibody [98A-1F9BB1] (ab135396) at 1 µg/mL

Lanes 1 and 8:
Ladder

Lane 2:
Human liver homogenate at 15 µg

Lane 3:
Human heart homogenate at 15 µg

Lane 4:
Rat liver homogenate at 15 µg

Lane 5:
Rat heart homogenate at 15 µg

Lane 6:
Mouse liver homogenate at 15 µg

Lane 7:
Mouse heart homogenate at 15 µg

Lane 9:
Human fibroblast whole cell lysate at 15 µg

Lane 10:
HeLa whole Cell Lysate at 15 µg

Lane 11:
HepG2 whole cell lysate at 15 µg

Lane 12:
H9C2 (Rat cardiomyoblast cell line) whole Cell Lysate at 15 µg

Lane 13:
H4IIE (Rat hepatoma cell line) whole Cell Lysate at 15 µg

Lane 14:
MEF (Mouse embryonic fibroblast cell line) whole Cell Lysate at 15 µg

Lane 15:
LDH (purified from rabbit skeletal muscle) at 0.015 µg

Secondary

All lanes:
Goat polyclonal to Mouse IgG - AP at 1/3000 dilution

Predicted band size: 37 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.