abcam

ab284694

Anti-LDH-C antibody [EP1746Y] - BSA and Azide free

RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EP1746Y
Purity	Tissue culture supernatant
Specificity	This antibody reacts with Lactate Dehydrogenase C / LDH-C. The immunogen sequence is 100% identical to Lactate Dehydrogenase C / LDH-C, but there is the possibility of cross-reactivity for lactate dehydrogenase A and lactate dehydrogenase B at 69% and 82%, respectively.

Reactivity data

ICC/IF

Not recommended

Species	Human
Dilution info	-

Notes	-

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information LDHC

Function	Possible role in sperm motility.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab284694 is the carrier-free version of ab52747

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	LDH-C also known as lactate dehydrogenase C is an enzyme belonging to the LDH family consisting of five similar proteins: LDH-A LDH-B LDH-C LDH-D and LDH-E. LDH-C displays a monomeric mass of about 36 kDa and primarily localizes in the testis. This enzyme catalyzes the reversible conversion of pyruvate to lactate with NADH serving as a cofactor. The kinetic properties and substrate affinities of LDH-C make it distinct from the other LDH isoforms found in various tissues improving its efficiency in the testes.
Biological function summary	Despite LDH-C being expressed much more in spermatozoa than in other tissues it plays a significant role in energy metabolism during spermatogenesis. It acts as

	part of the tetrameric LDH complex often in combination with other LDH isoforms. This complex facilitates lactate production which sperm cells rely on for energy in low-oxygen environments. The LDH-C form provides metabolic efficiency necessary for sperm motility and function.
Pathways	LDH-C is a critical participant in the glycolytic pathway which plays a central role in energy production under anaerobic conditions. LDH-C's role in converting pyruvate to lactate becomes essential for maintaining the balance of NAD+/NADH an important factor for glycolysis continuity. This enzyme also shares common pathways with LDH-A and LDH-B both important for similar metabolic functions but in other tissues like muscle and liver.
Associated diseases and disorders	Researchers have noted associations between LDH-C expression levels and male infertility. Abnormal LDH-C forms or its dysfunctional activity may lead to decreased sperm motility or other sperm defects resulting in fertility issues. While no direct connection to other proteins in disease contexts currently known the overlap in function with LDH isoforms particularly LDH-A and LDH-B suggests that altered metabolic environments may influence a range of metabolic disorders.

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

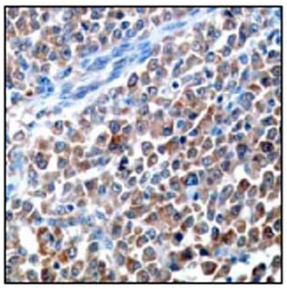
We do not recommend this combination. It is not covered by our product promise.

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.

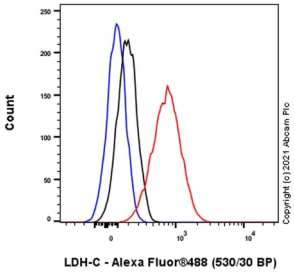
3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LDH-C antibody [EP1746Y] - BSA and Azide free (ab284694)

LDH-C Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LDH-C antibody

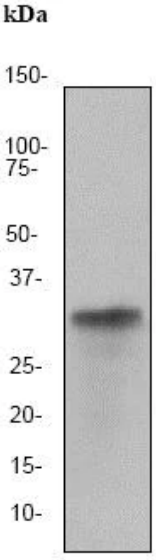
This data was developed using ab52747, the same antibody clone in a different buffer formulation.Immunohistochemical staining of paraffin-embedded human testis carcinoma using ab52747 at a 1/50 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-LDH-C antibody [EP1746Y] - BSA and Azide free (ab284694)

LDH-C Flow Cytometry (Intracellular) staining using rabbit Anti-LDH-C antibody

This data was developed using ab52747, the same antibody clone in a different buffer formulation.Flow Cytometry analysis of SK-BR-3 (Human breast adenocarcinoma epithelial cell) cells labeling LDH-C with ab52747 at 1/40 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-LDH-C antibody [EP1746Y] - BSA and Azide free (ab284694)

LDH-C Western blot staining of Human testis lysate using rabbit Anti-LDH-C antibody

This data was developed using ab52747, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-LDH-C antibody [EP1746Y] - BSA and Azide free (ab284694) at 1/20000 dilution

All lanes:
Human testis lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP labeled at 1/2000 dilution

Predicted band size: 36 kDa

Observed band size: 31 kDa

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