abcam

ab197019

Anti-CHD1L antibody [EPR14515(2)]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR14515(2)
Purification technique	Affinity purification Protein A
Concentration	1.365 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	1/5000
Notes	-

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/520
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/250
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/250
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information CHD1L

Function ATP-dependent chromatin remodeler that mediates chromatin-remodeling following DNA damage (PubMed:19661379, PubMed:29220652, PubMed:29220653, PubMed:33357431, PubMed:34210977, PubMed:34486521, PubMed:34874266). Recruited to DNA damage sites through interaction with poly-ADP-ribose: specifically recognizes and binds histones that are poly-ADP-ribosylated on serine residues in response to DNA damage (PubMed:19661379, PubMed:29220652, PubMed:29220653, PubMed:34486521, PubMed:34874266). Poly-ADP-ribose-binding activates the ATP-dependent chromatin remodeler activity, thereby regulating chromatin during DNA repair (PubMed:19661379, PubMed:29220652, PubMed:29220653, PubMed:34486521, PubMed:34874266). Catalyzes nucleosome sliding away from DNA breaks in an ATP-dependent manner (PubMed:19661379,

PubMed:29220652, PubMed:29220653). Chromatin remodeling activity promotes PARP2 removal from chromatin (PubMed:33275888).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	The CHD1L gene encodes a protein known as chromodomain helicase DNA-binding protein 1-like. This protein plays a role in chromatin remodeling using the energy from ATP hydrolysis to alter chromatin structure thereby facilitating processes such as DNA repair and transcription. The mass of CHD1L is approximately 120 kDa. This protein is expressed in various tissues with a notable presence in liver and cancerous tissues indicating its potential involvement in cellular proliferation and repair mechanisms.

Biological function summary	The function of CHD1L is significant in genomic stability and response to DNA damage. It acts as a part of the chromatin remodeling complex and contributes to the regulation of chromatin dynamics affecting gene expression and repair pathways. CHD1L interacts with other proteins involved in DNA repair ensuring the cell maintains genetic integrity under stress conditions.
Pathways	CHD1L is involved in the DNA damage response and chromatin organization pathways. It interacts with RAD51-associated protein which is important for homologous recombination repair and collaborates with proteins in the pathway to restore DNA integrity after damage. CHD1L's activity in these pathways highlights its role in maintaining cellular homeostasis and preventing genomic instability.
Associated diseases and disorders	CHD1L has been implicated in hepatocellular carcinoma and ovarian cancer. The overexpression of CHD1L in such cancers suggests a role in cancer progression by promoting cell proliferation and survival. Additionally its interaction with HNF4A a protein involved in liver cancer accentuates its impact on oncogenic pathways. Understanding CHD1L in these contexts could offer insights into therapeutic targets for cancer treatment.

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

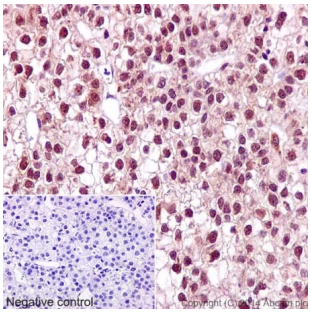
We do not recommend this combination. It is not covered by our product promise.

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.

7 product images

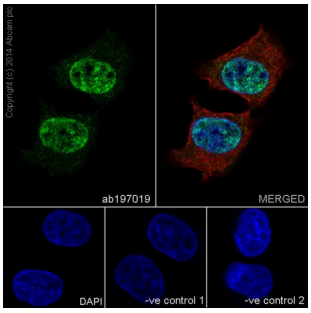


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CHD1L antibody [EPR14515(2)] (ab197019)

CHD1L Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CHD1L antibody

Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma tissue labeling CHD1L with ab197019 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution. Nuclear and weakly cytoplasm staining on Human hepatocellular carcinoma tissue is observed. Counter stained with Hematoxylin.
Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

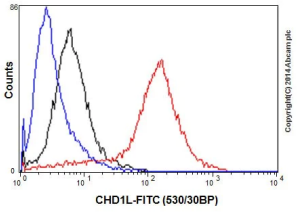
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-CHD1L antibody [EPR14515(2)] (ab197019)

CHD1L Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CHD1L antibody

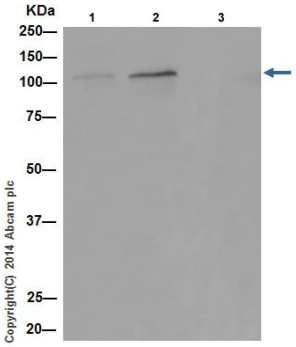
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling CHD1L with ab197019 at 1/500 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green). Nuclear and weakly cytoplasm staining on HeLa cell line was observed. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red). The negative controls are as follows:
-ve control 1: ab197019 at 1/500 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Flow Cytometry (Intracellular) - Anti-CHD1L antibody [EPR14515(2)] (ab197019)

CHD1L Flow Cytometry (Intracellular) staining using rabbit Anti-CHD1L antibody

Intracellular flow cytometric analysis of HeLa (Human epithelial cells from cervix adenocarcinoma)cells labeling CHD1L with ab197019 at 1/520 dilution (red) compared with a rabbit monoclonal IgG isotype control (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody.

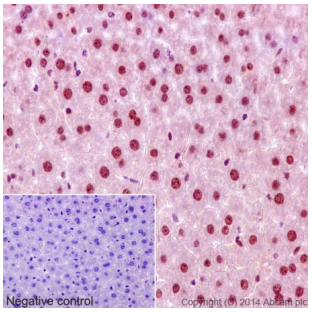


Immunoprecipitation - Anti-CHD1L antibody [EPR14515(2)] (ab197019)

CHD1L was immunoprecipitated from 293 (Human embryonic kidney) whole cell extract with ab197019 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab197019 at 1/1000 dilution. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution. Lane 1: 293 whole cell extract (Input) 10 µg. Lane 2: ab197019 IP in 293 whole cell extract. Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab197019 in 293 whole cell extract.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-CHD1L antibody [EPR14515(2)] (ab197019)

Predicted band size: 101 kDa

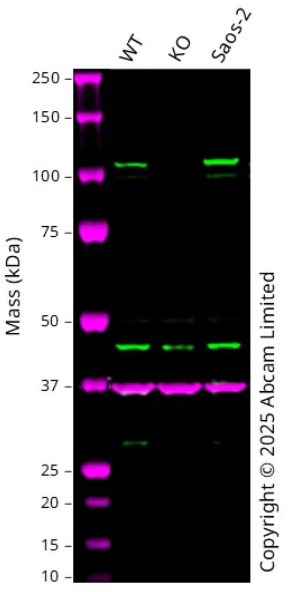


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CHD1L antibody [EPR14515(2)] (ab197019)

CHD1L Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CHD1L antibody

Immunohistochemical analysis of paraffin-embedded mouse liver tissue labeling CHD1L with ab197019 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution. Nuclear and weakly cytoplasm staining on mouse liver tissue is observed. Counter stained with Hematoxylin.
Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-CHD1L antibody [EPR14515(2)] (ab197019)

CHD1L Western blot staining using rabbit Anti-CHD1L antibody

Western blot: Rabbit Monoclonal [EPR14515(2)] to CHD1L ab197019 staining at 1/5000 dilution, shown in green; Mouse anti GAPDH (ab8245) loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 110 kDa in Wild-type U-87 MG cell lysates with no signal observed at this size in CHD1L knockout U-87 MG cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3pc Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Mouse 800CW & Goat anti-Rabbit 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-CHD1L antibody [EPR14515(2)] (ab197019) at 1/5000 dilution

Lane 1:
Wild-type U-87 MG at 20 µg

Lane 2:
CHD1L knockout U-87 MG at 20 µg

Lane 3:

Saos-2 at 20 µg

Secondary

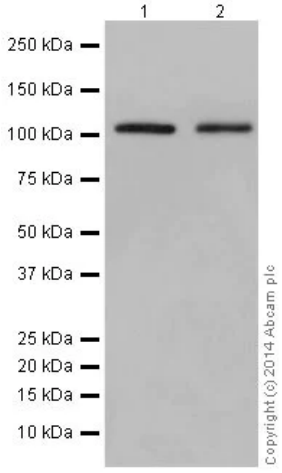
Lanes 1 - 3:
Goat anti-Mouse 800CW at 1/20000 dilution

Lanes 1 - 3:
Goat anti-Rabbit 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 101 kDa

Observed band size: 110 kDa, 36 kDa



Western blot - Anti-CHD1L antibody [EPR14515(2)] (ab197019)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-CHD1L antibody [EPR14515(2)] (ab197019) at 1/5000 dilution

Lane 1:
HeLa (Human epithelial cells from cervix adenocarcinoma) cell lysate at 20 µg

Lane 2:
A549 (Human lung carcinoma) cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 101 kDa

Observed band size: 101 kDa

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