abcam

ab240942

Anti-CHD3 antibody [EPNCIR110A] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPNCIR110A
Purification technique	Affinity purification Protein A

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Heat to 98 degrees, allow to cool for 10-20 minutes.

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

IP

Not recommended

Species	Rat, Human, Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human, Rat
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information CHD3

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab240942 is the carrier-free version of ab109195.

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.

Collaborations

This antibody was developed as part of a collaboration between Epitomics, the National Cancer Institute's Center for Cancer Research and the lab of Gordon Hager.

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.

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	CHD3 also known as Chromodomain Helicase DNA Binding Protein 3 is a protein involved in transcription regulation. The protein has a molecular mass of approximately 220 kDa. CHD3 is a member of the chromatin remodeler family and is expressed widely throughout various tissues. It contains dual chromodomains a helicase/ATPase domain and a DNA-binding domain enabling it to remodel chromatin structure by altering nucleosome positioning on DNA.
Biological function summary	CHD3 plays a significant role in modifying chromatin architecture and regulating the accessibility of the DNA to transcription factors. It functions as part of the NuRD (Nucleosome Remodeling and Deacetylase) complex which combines the features of ATP-dependent chromatin remodeling and histone deacetylase activity. CHD3 helps remodel nucleosomes and remove acetyl groups from histones which leads to chromatin condensation and transcriptional repression. Its activity influences genes involved in development differentiation and cell cycle control.
Pathways	CHD3's function integrates into pathways that control gene expression and DNA repair. It plays a role in the transcriptional regulation pathway working alongside proteins like HDAC1 and NuRD components. Additionally CHD3 participates in the DNA damage response cooperating with proteins such as CHD4 and RBBP4 to ensure genomic stability. These interactions and functions place CHD3 at a strategic position within cellular mechanisms maintaining transcription fidelity and genomic integrity.
Associated diseases and disorders	CHD3 associations with cancer and developmental disorders stand out. Abnormal expression or mutations in CHD3 can contribute to tumorigenesis as it can affect the expression and repression of oncogenes and tumor suppressor genes. Furthermore CHD3 mutations have been linked to Snijders Blok-Campeau syndrome a neurodevelopmental disorder. The interaction between CHD3 and other proteins like HDAC1 and CHD4 plays a critical role in the manifestation of these conditions influencing pathways that drive disease progression and phenotype expression.

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.

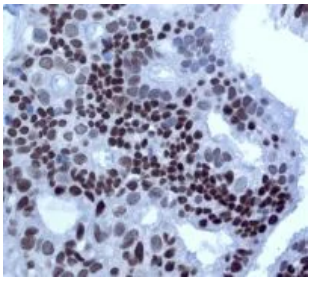
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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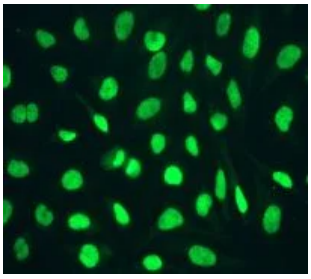
5 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CHD3 antibody [EPNCIR110A] - BSA and Azide free (ab240942)

CHD3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CHD3 antibody

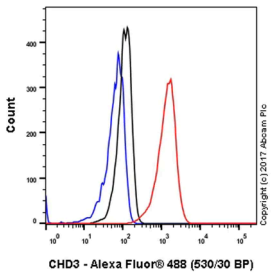
Immunohistochemical staining of paraffin-embedded Human ovary tissue using ab109195 at a dilution of 1/100.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109195)
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-CHD3 antibody [EPNCIR110A] - BSA and Azide free (ab240942)

CHD3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CHD3 antibody

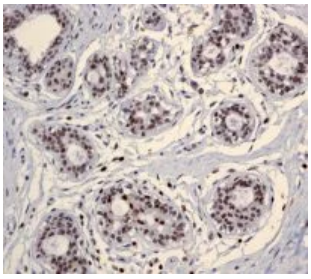
Immunofluorescent staining of HeLa cells using ab109195 at a dilution of 1/100.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109195)



Flow Cytometry (Intracellular) - Anti-CHD3 antibody [EPNCIR110A] - BSA and Azide free (ab240942)

CHD3 Flow Cytometry (Intracellular) staining using rabbit Anti-CHD3 antibody

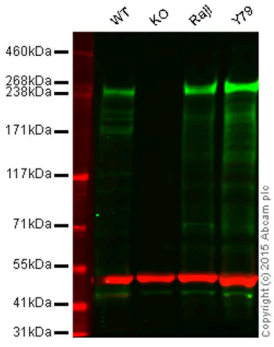
Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling CHD3 with purified ab109195 at 1/230 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) (ab172730) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109195)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CHD3 antibody [EPNCIR110A] - BSA and Azide free (ab240942)

CHD3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CHD3 antibody

Immunohistochemical staining of paraffin-embedded Human breast tissue using ab109195 at a dilution of 1/100.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109195)
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-CHD3 antibody [EPNCIR110A] - BSA and Azide free (ab240942)

CHD3 Western blot staining using rabbit Anti-CHD3 antibody

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: CHD3 knockout HAP1 cell lysate (20 µg)
Lane 3: Raji cell lysate (20 µg)
Lane 4: Y79 cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab109195 observed at 245 kDa. Red - loading control, ab8245, observed at 37 kDa.
ab109195 was shown to specifically react with CHD3 when CHD3 knockout samples were used. Wild-type and CHD3 knockout samples were subjected to SDS-PAGE. ab109195 and ab8245 (loading control to GAPDH) were diluted 1/1000 and 1/2000 and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW)preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1/10000 dilution for 1 h at room temperature before imaging.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide (ab109195).

All lanes:
Western blot - Anti-CHD3 antibody [EPNCIR110A] (ab109195)

Predicted band size: 226 kDa

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