abcam

ab264417

Anti-CHD4 antibody [BLR066G]

Recombinant | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.8 - 8.6 Preservative: 0.09% Sodium azide Constituents: 98% Borate buffered saline, 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human CHD4 aa 1-100. The exact immunogen used to generate this antibody is proprietary information. Database link Q14839
Clone number	BLR066G
Purification technique	Affinity purification
Purification notes	Purified from TCS.

Reactivity data

IP

Tested

Species	Human
Dilution info	-
Notes	20 µl/mg lysate

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1 µL for 10^6 Cells
Notes	-

Expected

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

Target data

See full target information CHD4

Function	ATP-dependent chromatin-remodeling factor that binds and distorts nucleosomal DNA (PubMed:28977666, PubMed:32543371). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin

(PubMed:16428440, PubMed:17626165, PubMed:28977666, PubMed:9804427). Localizes to acetylated damaged chromatin in a ZMYND8-dependent manner, to promote transcriptional repression and double-strand break repair by homologous recombination (PubMed:25593309). Involved in neurogenesis (By similarity).

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	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

REACH authorisation
Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.
It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

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Supplementary info

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

Activity summary	CHD4 also known as CDH4 is a protein that functions as part of the nucleosome remodeling and deacetylase (NuRD) complex. CHD4 has a molecular mass of approximately 218 kDa. The protein contains a chromo domain a helicase domain and two PHD-type zinc fingers. It is expressed ubiquitously in human tissues with higher expression levels seen in the spleen and fetal brain. This protein plays an essential role in DNA transcription regulation by modifying chromatin structure.
Biological function summary	CHD4 acts within the NuRD complex to mediate transcriptional repression. This complex combines chromatin remodeling with histone deacetylation to alter chromatin dynamics affecting gene expression. CHD4's involvement in the complex facilitates the static organization of chromatin therefore contributing to

	transcriptional silencing of specific gene sets. The protein's activity is often in response to environmental and developmental cues playing an integral role in cellular differentiation and proliferation processes.
Pathways	CHD4 connects closely with DNA damage repair and cell cycle regulation pathways. It participates actively in the DNA damage response pathway by facilitating the repair of double-strand breaks working alongside proteins such as ATM and ATR. CHD4 also influences the cell cycle by interacting with cyclins and cyclin-dependent kinases which maintain proper cell cycle progression and check points.
Associated diseases and disorders	CHD4 has been linked to various cancers and neurodevelopmental disorders. Alterations or mutations in CHD4 have associations with certain cancers like colorectal cancer where it affects cellular proliferation and migration. In neurodevelopmental disorders disrupted CHD4 function may lead to chromatin misregulation contributing to intellectual disabilities. CHD4's interactions with proteins such as p53 in cancer and MeCP2 in neurological conditions highlight its connections in disease mechanisms.

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

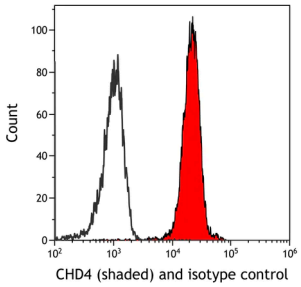
We do not recommend this combination. It is not covered by our product promise.

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.

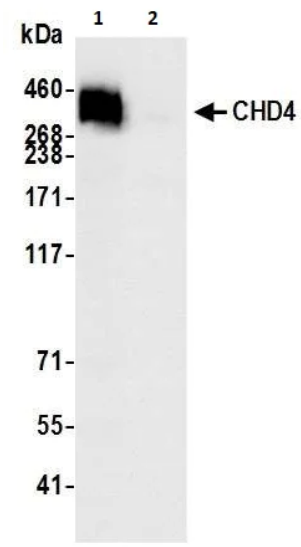
Full details and terms and conditions can be found here:
Terms & Conditions.

4 product images



Flow Cytometry - Anti-CHD4 antibody [BLR066G] (ab264417)

Flow cytometry overlay histogram of 4% formaldehyde fixed Jurkat cells permeabilized with 90% methanol labeling human CHD4 with ab264417 at 1 µl per 1 x 10^6 cells (shaded) compared with a Isotype control (unshaded). Secondary antibody details: Goat Anti-Rabbit IgG H&L (DyLight® 488) (ab96883).



Immunoprecipitation - Anti-CHD4 antibody [BLR066G] (ab264417)

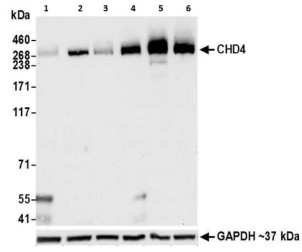
CHD4 was immunoprecipitated from 1 mg HEK-293T whole cell lysate using ab264417 at 20 µl/mg lysate. Western blot was performed on the immunoprecipitate using ab264417 at 1/1000 dilution.
Lane 1: ab264417 IP in HEK-293T whole cell lysate.
Lane 2: Control IgG.

All lanes:
Immunoprecipitation - Anti-CHD4 antibody [BLR066G] (ab264417)

Developed using the ECL technique.

Predicted band size: 218 kDa

Exposure time: 1s



Western blot - Anti-CHD4 antibody [BLR066G] (ab264417)

All lanes:
Western blot - Anti-CHD4 antibody [BLR066G] (ab264417) at 1/1000 dilution

Lane 1:
MCF7 whole cell lysate at 50 µg

Lane 2:
A549 whole cell lysate at 50 µg

Lane 3:
HeLa whole cell lysate at 50 µg

Lane 4:
K562 whole cell lysate at 50 µg

Lane 5:
Jurkat whole cell lysate at 50 µg

Lane 6:
RKO whole cell lysate at 50 µg

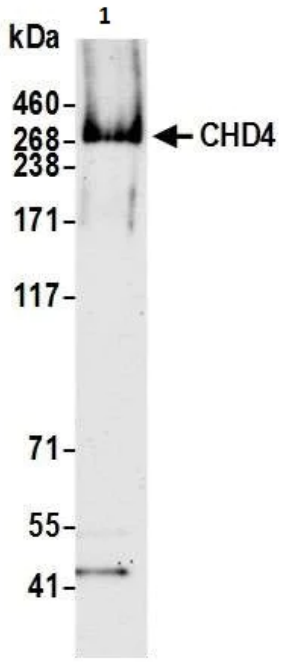
Secondary

All lanes:
Rabbit anti-GAPDH

Developed using the ECL technique.

Predicted band size: 218 kDa

Exposure time: 10s



Western blot - Anti-CHD4 antibody [BLR066G] (ab264417)

Cells prepared using NETN lysis buffer.
All lanes:
Western blot - Anti-CHD4 antibody [BLR066G] (ab264417) at 1/1000 dilution

All lanes:
TCMK-1 whole cell lysate at 50 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG

Developed using the ECL technique.

Predicted band size: 218 kDa

Exposure time: 75s

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