abcam

ab198977

Anti-CGBP antibody [EPR19199] - ChIP Grade

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	EPR19199
Purification technique	Affinity purification Protein A
Concentration	0.671 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/40
Notes	-

Expected

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

ChIP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Rat
Dilution info	1/2000
Notes	-

Species	Human
Dilution info	1/2000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/250
Notes	-

Species	Human
Dilution info	1/250
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/150
Notes	-

Species	Human
Dilution info	1/150
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/1000
Notes	IHC is recommended for rat and mouse only Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/1000
Notes	IHC is recommended for rat and mouse only Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Expected

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

Target data

See full target information CXXC1

Function	Transcriptional activator that exhibits a unique DNA binding specificity for CpG unmethylated motifs with a preference for CpGG.

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	CGBP also known as CpG-binding protein is a DNA-binding protein with a mass of about 66 kDa. It is recognized for its function in binding to unmethylated CpG motifs in DNA. Scientists have observed its expression mainly in the nucleus where it plays a significant role in regulating gene expression. The interaction with these CpG regions is essential for maintaining gene activity and stability.
Biological function summary	CGBP influences the transcriptional regulation by acting as a transcription factor. This protein is part of a complex that includes other regulatory proteins assisting in the activation of specific gene sets. It participates by directing the cellular signals that modulate chromatin structure impacting the transcriptional landscape of several genes.
Pathways	CGBP interacts with cellular mechanisms that involve DNA methylation and histone modification. It is integrated within pathways like the Wnt signaling pathway and is related to proteins such as DNMT1 which is important for DNA methylation processes. This interaction supports its role in modulating gene silencing and activation across different cellular contexts.
Associated diseases and disorders	Scientists have linked CGBP to cancer and autoimmune diseases. Alterations in CGBP expression or function can disrupt normal epigenetic regulation contributing to oncogenesis and immune dysregulation. In cancer its interaction with DNMT1 further associates it with aberrant methylation patterns a hallmark of many tumors. Similarly dysregulation of CGBP can influence pathways leading to autoimmune conditions complicating immune cell homeostasis.

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.

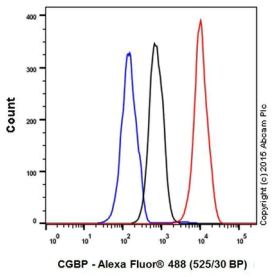
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

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Terms & Conditions.

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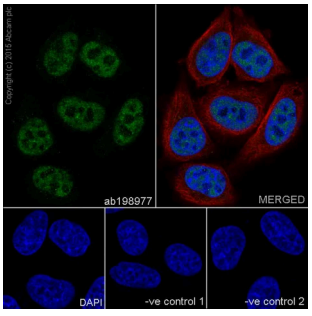
14 product images



Flow Cytometry (Intracellular) - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed 293T (Human epithelial cell line from embryonic kidney) cells labeling CGBPwith ab198977 at 1/150 dilution (red) compared with a Rabbit IgG,monoclonal [EPR25A] - Isotype control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti Rabbit IgG (FITC) at 1/500 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

CGBP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CGBP antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling CGBP with ab198977 at 1/250 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing nuclear staining on HeLa cell line.

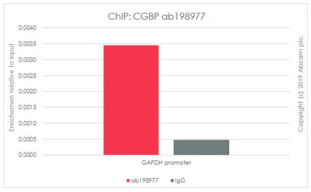
The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin-Loading Control (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG (AlexaFluor®594) preadsorbed (ab150120) at 1/1000 dilution (red).

The negative controls are as follows:-

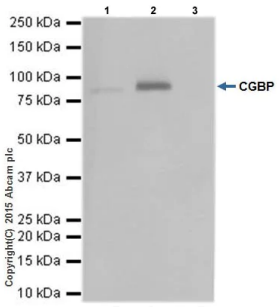
-ve control 1: ab198977 at 1/250 dilution followed by ab150120 at 1/1000 dilution.

-ve control 2: ab7291 at 1/1000 dilution followed by ab150077 at 1/1000 dilution.



ChIP - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

Chromatin was prepared from HeLa cells according to the Abcam Dual-X-ChIP protocol. Cells were fixed with EGS for 30 minutes, then formaldehyde for 10 minutes.
The ChIP was performed with 25 µg of chromatin, 5 µg of ab198977 (red), and 20 µl of Protein A/G sepharose beads. 5 µg of rabbit normal IgG was added to the beads control (gray). The immunoprecipitated DNA was quantified by real time PCR (Sybr green approach).
Primers and probes are located in the first kb of the transcribed region.



Immunoprecipitation - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

CGBP was immunoprecipitated from 1mg of HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab198977 at 1/40 dilution.
Western blot was performed from the immunoprecipitate using ab198977 at 1/1000 dilution.

VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.

Lane 1: HeLa whole cell lysate, 10µg (Input).

Lane 2: ab198977 IP in HeLa whole cell lysate.

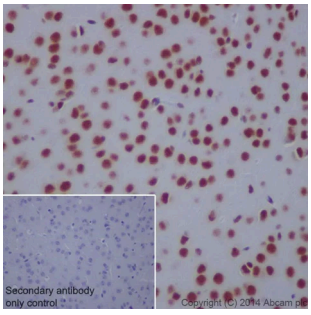
Lane 3: Rabbit IgG,monoclonal [EPR25A] -Isotype Control (ab172730) instead of ab198977 in HeLa whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 1 second.

All lanes:
Immunoprecipitation - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

Predicted band size: 76 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

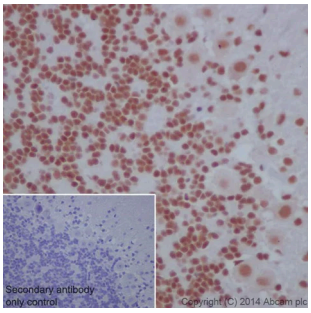
CGBP Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CGBP antibody

Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling CGBP with ab198977 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Nuclear staining on mouse cerebrum tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only 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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

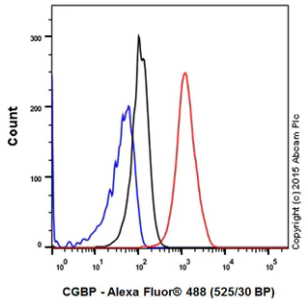
CGBP Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CGBP antibody

Immunohistochemical analysis of paraffin-embedded Rat cerebellum tissue labeling CGBP with ab198977 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Nuclear staining on rat cerebellum tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

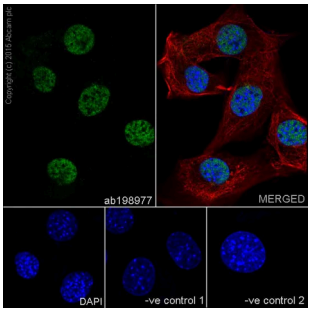
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed NIH/3T3 cells labeling CGBPwith ab198977 at 1/150 dilution (red) compared with a Rabbit IgG,monoclonal-Isotype control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti Rabbit IgG (FITC) at a dilution of 1/500 was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

CGBP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CGBP antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (Mouse embryonic fibroblast cell line) cells labeling CGBP with ab198977 at 1/250 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing nuclear staining on NIH/3T3 cell line.

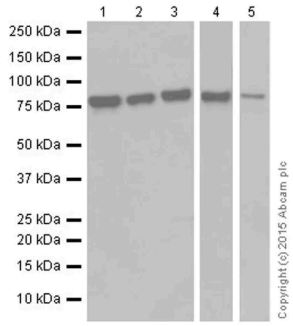
The nuclear counterstain is DAPI (blue).

Tubulin is detected Anti-alpha Tubulin antibody - Loading Control (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG (AlexaFluor®594) preadsorbed (ab150120) at 1/1000 dilution (red).

The negative controls are as follows:-

-ve control 1: ab198977 at 1/250 dilution followed by ab150120 at 1/1000 dilution.

-ve control 2: ab7291 at 1/1000 dilution followed by ab150077 at 1/1000 dilution.



Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

CGBP Western blot staining using rabbit Anti-CGBP antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1/2/3: 30 seconds; Lane 4: 3 minutes; Lane 5: 10 seconds.

All lanes:
Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977) at 1/20000 dilution

Lane 1:
293T (Human epithelial cell line from embryonic kidney) whole cell lysate at 10 µg

Lane 2:
K562 (Human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate at 10 µg

Lane 3:
Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate at 10 µg

Lane 4:
MOLT-4 (Human lymphoblastic leukemia cell line) whole cell lysate at 10 µg

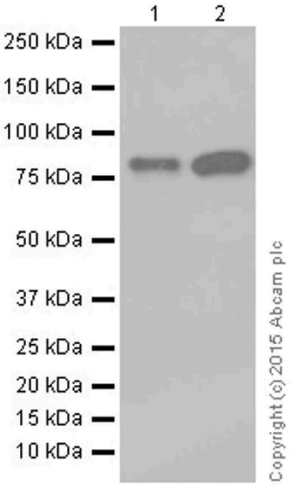
Lane 5:
HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 76 kDa

Observed band size: 76 kDa



Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977) at 1/2000 dilution

Lane 1:
Human fetal heart lysate at 10 µg

Lane 2:
Human fetal kidney lysate at 10 µg

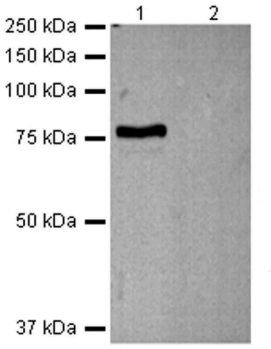
Secondary

All lanes:
Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 76 kDa

Observed band size: 76 kDa

Exposure time: 3min



Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

Blocking buffer: 5% NFDM/TBST.
Dilution buffer: 1% BSA/TBST.

This data is from our collaborator Hengyu-Fan's lab (Life Sciences Institute Zhejiang University).

All lanes:
Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977) at 1/500 dilution

Lane 1:
WT HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 2:
CFP1(CGBP) KO HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

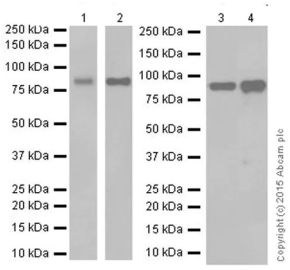
Secondary

All lanes:
Goat anti-Rabbit IgG (H+L), HRP at 1/5000 dilution

Predicted band size: 76 kDa

Observed band size: 76 kDa

Exposure time: 15s



Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

CGBP Western blot staining using rabbit Anti-CGBP antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1: 10 seconds; Lane 2/3/4: 3 minutes.

All lanes:
Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977) at 1/2000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Mouse heart lysate at 10 µg

Lane 3:
Rat brain lysate at 10 µg

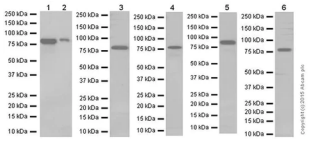
Lane 4:
Rat spleen lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 76 kDa

Observed band size: 76 kDa



Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

CGBP Western blot staining using rabbit Anti-CGBP antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1/2: 10 seconds; Lane 3/4/6: 8 seconds; Lane 5: 3 minutes.

Lanes 1 - 4:
Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977) at 1/2000 dilution

Lanes 5 - 6:
Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977) at 1/10000 dilution

Lane 1:
RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 2:
PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate at 10 µg

Lane 3:
L-929 (Mouse connective tissue fibroblast cell line) whole cell lysate at 10 µg

Lane 4:
NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate at 10 µg

Lane 5:
L6 (Rat skeletal muscle cell line) whole cell lysate at 10 µg

Lane 6:
F9 (Mouse embryonic testicular cancer cell line) whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 76 kDa

Observed band size: 76 kDa

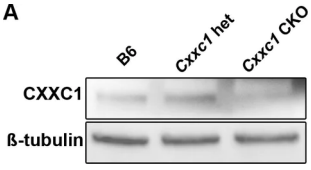


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Western blot - Anti-CGBP antibody [EPR19199] - ChIP Grade (ab198977)

CGBP western blot using anti-CGBP antibody [EPR19199] - ChIP Grade ab198977. Publication image and figure legend from Tian, H., Billings, T., et al., 2018, PLoS Genet, PubMed 30365547.

ab198977 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab198977 please see the product overview.

Knocking out CXXC1 does not affect male fertility or testis histology.(A) CXXC1 is depleted in Stra8-cre CKO testes. Western blot of CXXC1 from adult B6, Cxxc1 het and CKO testicular extract. ß-tubulin was used as internal loading control. (B) CXXC1 is present in Sertoli cells but not in spermatocytes of Stra8-cre CKO mice. Immunostaining of CXXC1 on Cxxc1 het and CKO seminiferous tubule cross sections. Green, CXXC1; grey, DAPI. Long arrows, Sertoli cells; short arrows, spermatogonia; arrowhead, spermatocytes. Scale bar, 50 μm. (C) No change in fertility tests in CKO mice compared to B6 and Cxxc1 heterozygous controls. The number of viable pups for each genotype is shown. (D) Testis index (testis weight/body weight) is not changed in CKO mice compared to B6 and Cxxc1 heterozygous controls. (E) Normal histology of testis, epididymis and ovary is observed in both Cxxc1 control and CKO mice. Top panels, PAS staining of seminiferous tubule sections; scale bar, 100 μm. Middle panels, H&E staining of epididymis sections; scale bar, 200 μm. Bottom panels, H&E staining of 21 dpp ovary sections, Scale bar, 250 μm. Left panels, het control; right panels, Cxxc1 CKO with Stra8-Cre in male mice, and Ddx4-Cre in females. (F) No increased apoptosis is observed in testes of CKO mice. TUNEL staining in Cxxc1 het and CKO. Top panels, scale bar, 50 μm. Bottom panels, the apoptotic cell number is quantified as TUNEL positive cell number per seminiferous tubule. Data represent as mean ± SD, p = 0.94 by Student t-test.

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