abcam

ab253202

Anti-CREBBP antibody [EPR23418-23] - ChIP Grade

Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202) is a rabbit monoclonal antibody detecting CREBBP in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF, ChIP**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | Advanced Validation | 20ul selling size

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	EPR23418-23
Purification technique	Affinity purification Protein A
Concentration	0.495 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ChIC/CUT&RUN-seq

Tested

Species	Human
Dilution info	5 µg

Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Human
Dilution info	1/100
Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-

Notes	-

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Species	Human
Dilution info	1/30
Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

ChIP

Tested

Species	Human
Dilution info	5 µg/mL
Notes	-

Expected

Species	Rat

Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse, Recombinant full length protein - Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

Species	Recombinant full length protein - Human
Dilution info	1/1000
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Human
Dilution info	1/500
Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Target data

See full target information CREBBP

Function	Acetylates histones, giving a specific tag for transcriptional activation (PubMed:21131905, PubMed:24616510). Mediates acetylation of histone H3 at 'Lys-18' and 'Lys-27' (H3K18ac and H3K27ac, respectively) (PubMed:21131905). Also acetylates non-histone proteins, like DDX21, FBL, IRF2, MAFG, NCOA3, POLR1E/PAF53 and FOXO1 (PubMed:10490106, PubMed:11154691, PubMed:12738767, PubMed:12929931, PubMed:24207024, PubMed:28790157, PubMed:30540930, PubMed:35675826, PubMed:9707565). Binds specifically to phosphorylated CREB and enhances its transcriptional activity toward cAMP-responsive genes. Acts as a coactivator of ALX1. Acts as a circadian transcriptional coactivator which enhances the activity of the circadian transcriptional activators: NPAS2-BMAL1 and CLOCK-BMAL1 heterodimers (PubMed:14645221). Acetylates PCNA; acetylation promotes removal of chromatin-bound PCNA and its degradation during nucleotide excision repair (NER) (PubMed:24939902). Acetylates POLR1E/PAF53, leading to decreased association of RNA polymerase I with the rDNA promoter region and coding region (PubMed:24207024). Acetylates DDX21, thereby inhibiting DDX21 helicase activity (PubMed:28790157). Acetylates FBL, preventing methylation of 'Gln-105' of histone H2A (H2AQ104me) (PubMed:30540930). In addition to protein acetyltransferase, can use different acyl-CoA substrates, such as lactoyl-CoA, and is able to mediate protein lactylation (PubMed:38128537). Catalyzes lactylation of MRE11 in response to DNA damage, thereby promoting DNA double-strand breaks (DSBs) via homologous recombination (HR) (PubMed:38128537). Functions as a transcriptional coactivator for SMAD4 in the TGF-beta signaling pathway (PubMed:25514493).

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

What is this antibody validated in?
Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF), ChIP in Human, Mouse, Rat samples.

What is the molecular weight of CREBBP?
Anti-CREBBP [EPR23418-23] - ChIP Grade (ab253202) specifically detects a band for CREBBP (UniProt: Q92793) at a molecular weight of 51kDa.

Other related products
We have a range of other formats of antibody clone [EPR23418-23] also available for your convenience: ab253202, Carrier free - ab283283

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.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

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

Activity summary	CREBBP also known as CREB Binding Protein or CBP is a multifunctional protein with a molecular weight of approximately 265 kDa. This protein serves as a transcriptional coactivator and possesses intrinsic histone acetyltransferase (HAT) activity. CREBBP is ubiquitously expressed making it present in various tissues throughout the body. Its interaction with different transcription factors facilitates transcriptional activation by remodeling chromatin structure.
Biological function summary	CREBBP plays a pivotal role in regulating gene expression by serving as a coactivator that bridges transcription factors with the basal transcription machinery. CREBBP as part of large multiprotein complexes acetylates histones as well as non-histone proteins influencing chromatin accessibility and transcriptional

	efficiency. Its HAT activity contributes to the regulation of cell cycle differentiation and DNA repair.
Pathways	CREBBP integrates into both the p53 and Hedgehog signaling pathways modulating various cellular responses. In the p53 pathway CREBBP interacts with the tumor suppressor protein p53 enhancing p53's ability to initiate expression of genes involved in cell cycle arrest and apoptosis. In the Hedgehog pathway CREBBP regulates transcription factors such as Gli proteins. The interplay between CREBBP and these pathways underlines its importance in maintaining cellular homeostasis and preventing oncogenesis.
Associated diseases and disorders	Mutations or dysregulation of CREBBP are associated with Rubinstein-Taybi syndrome and various cancers including acute myeloid leukemia. In Rubinstein-Taybi syndrome CREBBP mutations impair cognitive development and skeletal malformations. In cancer particularly acute myeloid leukemia alterations in CREBBP disrupt normal cell growth regulation and lead to tumorigenesis. The protein's interaction with factors like p300 another histone acetyltransferase further emphasizes its critical involvement in these pathological conditions.

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

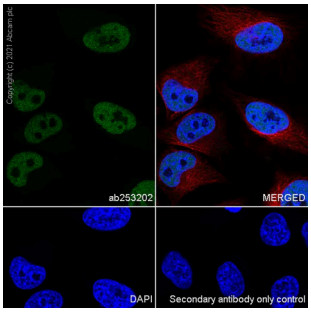
We do not recommend this combination. It is not covered by our product promise.

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.

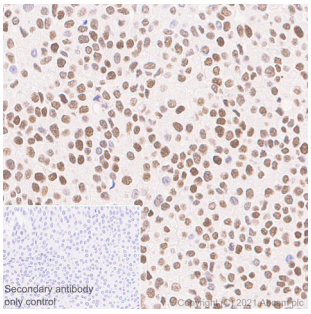
15 product images



Immunocytochemistry/ Immunofluorescence - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

CREBBP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CREBBP antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa cells labelling CREBBP with ab253202 at 1/500 (1.032 µg/mL) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 µg/mL) dilution (Green). Confocal image showing mianly nuclear staining in HeLa cell line is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5 µg/mL) dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 µg/mL) dilution.

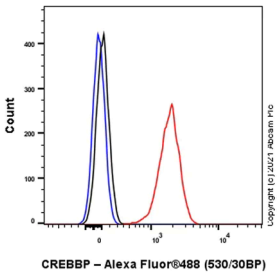


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

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

Immunohistochemical analysis of paraffin-embedded Human bladder cancer tissue labelling CREBBP with ab253202 at 1/2000 (0.258 µg/mL) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Nuclear staining in human bladder cancer (PMID: 25915404). The section was incubated with ab253202 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

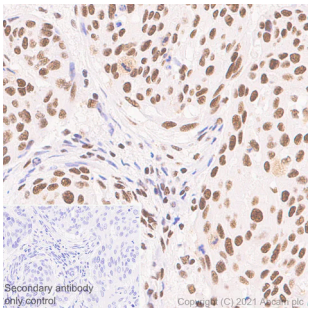
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

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

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling CREBBP with ab253202 at 1/500 dilution (0.1µg)/ red (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

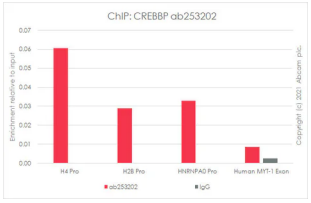


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

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

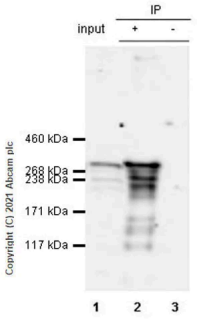
Immunohistochemical analysis of paraffin-embedded Human cervical cancer tissue labelling CREBBP with ab253202 at 1/2000 (0.258 µg/mL) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Nuclear staining in human cervical cancer. The section was incubated with ab253202 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



ChIP - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

Chromatin was prepared from HeLa cells according to the Abcam Dual-X-ChIP protocol. Cells were fixed with 1.5 mM EGS for 30mins and then formaldehyde for 10min.
The ChIP was performed with 25 µg of chromatin, 5 µg of ab253202 (red), or 5 µg of rabbit normal IgG ab172730 (gray) and 25 µl of Protein A/G Dynabeads. The immunoprecipitated DNA was quantified by real time PCR (Taqman approach for active and inactive loci, Sybr green approach for heterochromatic loci).
Primers are from paper PMID:2178921



Immunoprecipitation - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

CREBBP was immunoprecipitated from 0.35 mg HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate 10 µg with ab253202 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab253202 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate 10 µg

Lane 2: ab253202 IP in HeLa whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab253202 in HeLa whole cell lysate

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

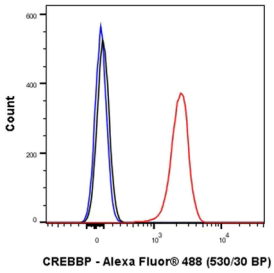
Exposure time: 48 seconds.

Fresh lysates were used in this IP.

All lanes:
Immunoprecipitation - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

Predicted band size: 265 kDa

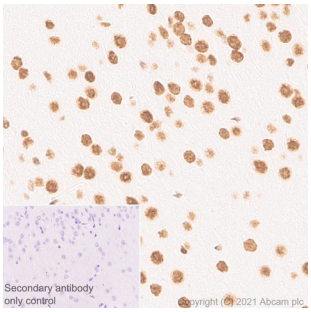
Observed band size: 300 kDa



Flow Cytometry (Intracellular) - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

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

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized NIH/3T3 (Mouse embryonic fibroblast) cells labelling CREBBP with ab253202 at 1/500 dilution (0.1µg)/ red (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

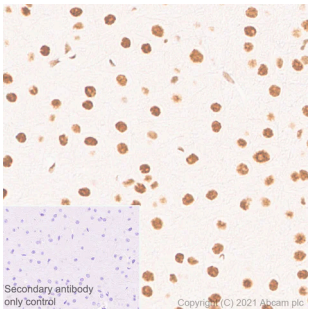


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

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

Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labelling CREBBP with ab253202 at 1/2000 (0.258 µg/mL) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Mainly nuclear staining in rat cerebrum (PMID: 12445700). The section was incubated with ab253202 for 10 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

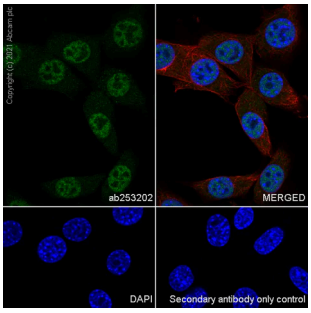


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

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

Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labelling CREBBP with ab253202 at 1/2000 (0.258 µg/mL) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Mainly nuclear staining in mouse cerebrum. The section was incubated with ab253202 for 10 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

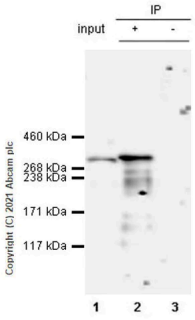
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

CREBBP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CREBBP antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized NIH/3T3 cells labelling CREBBP with ab253202 at 1/100 (5.16 µg/mL) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 µg/mL) dilution (Green). Confocal image showing mianly nuclear staining in NIH/3T3 cell line is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5 µg/mL) dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 µg/mL) dilution.



Immunoprecipitation - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

CREBBP was immunoprecipitated from 0.35 mg NIH/3T3 (mouse embryonic fibroblast), whole cell lysate 10 µg with ab253202 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab253202 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: NIH/3T3 (mouse embryonic fibroblast), whole cell lysate 10 ug

Lane 2: ab253202 IP in NIH/3T3 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab253202 in NIH/3T3 whole cell lysate

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

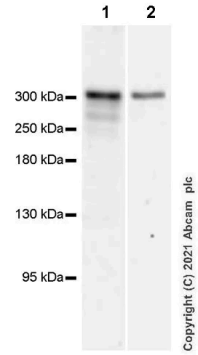
Exposure time: 110 seconds.

Fresh lysates were used in this IP.

All lanes:
Immunoprecipitation - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

Predicted band size: 265 kDa

Observed band size: 300 kDa



Western blot - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

CREBBP Western blot staining using rabbit Anti-CREBBP antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST. Fresh lysates were used in this WB.
Exposure time: Lane 1: 81 seconds; Lane 2: 3 minutes.

All lanes:
Western blot - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202) at 1/1000 dilution

Lane 1:
HAP1 (human chronic myelogenous leukemia near-haploid cell), whole cell lysate at 28 µg

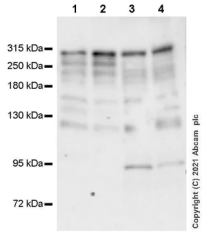
Lane 2:
HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate at 14 µg

Secondary

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

Predicted band size: 265 kDa

Observed band size: 300 kDa



Western blot - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

CREBBP Western blot staining using rabbit Anti-CREBBP antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST. Fresh lysates were used in this WB.
Exposure time: 81 seconds.

All lanes:
Western blot - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202) at 1/1000 dilution

Lane 1:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
293T (human embryonic kidney epithelial cell), whole cell lysate at 20 µg

Lane 3:
NIH/3T3 (mouse embryonic fibroblast), whole cell lysate at 20 µg

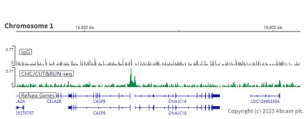
Lane 4:
PC-12 (rat adrenal gland pheochromocytoma), whole cell lysate at 20 µg

Secondary

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

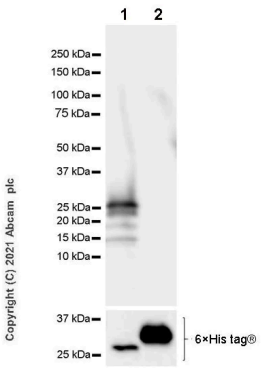
Predicted band size: 265 kDa

Observed band size: 300 kDa



ChIC/CUT&RUN sequencing - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

ChIC/CUT&RUN was performed using a pAG-MNAse at a final concentration of 700 ng/mL, 2 x 10^5 HeLa (Human cervix adenocarcinoma epithelial cell line) cells and 5µg of ab253202 [EPR23418-23]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control ab172730 is also shown. Additional screenshots of mapped reads can be found in the Protocol booklet in the Product Protocol section. The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.



Western blot - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202)

Blocking and diluting buffer and concentration: 5% NFDM/TBST. This antibody has no cross-reaction with human EP300.
These two recombinant proteins were made in-house and expressed from the E.coli expression system.

Exposure time: 1 second.

All lanes:
Western blot - Anti-CREBBP antibody [EPR23418-23] - ChIP Grade (ab253202) at 1/1000 dilution

Lane 1:
His-tagged human CREBBP recombinant protein (aa2221-2442) at 0.01 µg

Lane 2:
His-tagged human EP300 recombinant protein (aa2215-2414) at 0.01 µg

Secondary

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

Predicted band size: 265 kDa

Observed band size: 25 kDa

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