abcam

ab253197

Anti-MeCP2 antibody [EPR23201-3]

Anti-MeCP2 antibody [EPR23201-3] (ab253197) is a rabbit monoclonal antibody detecting MeCP2 in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | KO Validated | 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	EPR23201-3
Purification technique	Affinity purification Protein A
Specificity	This antibody did not work in IHC in human brain samples.
Concentration	0.627 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/4000
Notes	This antibody did not work in IHC in human brain samples. Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/4000
Notes	This antibody did not work in IHC in human brain samples. Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/4000
Notes	This antibody did not work in IHC in human brain samples. Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

WB

Tested

Species	Mouse
Dilution info	1/1000

Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

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	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/600
Notes	-

Species	Human

Dilution info	1/600
Notes	-

Expected

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

ChIP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information MECP2

Function	Chromosomal protein that binds to methylated DNA. It can bind specifically to a single methyl-CpG pair. It is not influenced by sequences flanking the methyl-CpGs. Mediates transcriptional repression through interaction with histone deacetylase and the corepressor SIN3A. Binds both 5-methylcytosine (5mC) and 5-hydroxymethylcytosine (5hmC)-containing DNA, with a preference for 5-methylcytosine (5mC).

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-MeCP2 antibody [EPR23201-3] (ab253197) 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) in Human, Mouse, Rat samples.

What is the molecular weight of MeCP2?
Anti-MeCP2 [EPR23201-3] (ab253197) specifically detects a band for MeCP2 (UniProt: P51608) at a molecular weight of 52kDa.

Specificity confirmed
The specificity of Anti-MeCP2 antibody [EPR23201-3] (ab253197) has been confirmed by Western blot testing in MECP2 Knockout HAP1 cells.

Other related products
We have a range of other formats of antibody clone [EPR23201-3] also available for your convenience: ab253197, Carrier free - ab273059, Carrier free - ab324009

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.

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.

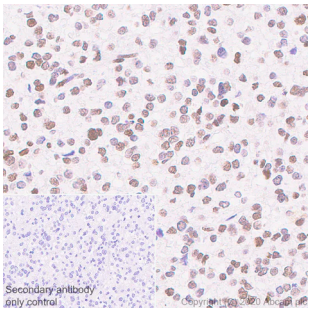
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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18 product images



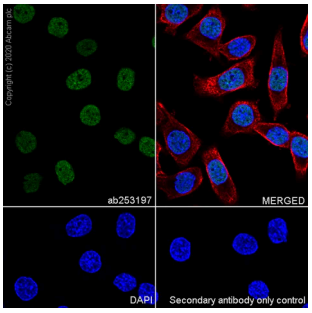
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MeCP2 antibody

Immunohistochemical analysis of paraffin-embedded Human astrocytoma tissue labeling MeCP2 with ab253197 at 1/4000 dilution (0.158 ug/ml) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on human astrocytoma (PMID: 11809720). The section was incubated with ab253197 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins

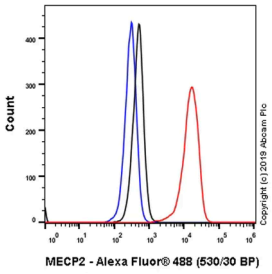
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Immunocytochemistry/ Immunofluorescence - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-MeCP2 antibody

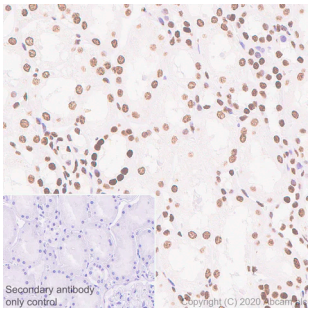
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized SH-SY5Y cells labelling MeCP2 with ab253197 at 1/500 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing nuclear staining in SH-SY5Y cells. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5 dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1000 2 ug/ml dilution.



Flow Cytometry (Intracellular) - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 Flow Cytometry (Intracellular) staining using rabbit Anti-MeCP2 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized SH-SY5Y (Human neuroblastoma epithelial cell) cells labelling MeCP2 with ab253197 at 1/600 dilution (0.1ug) (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.

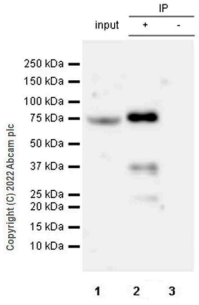


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MeCP2 antibody

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling MeCP2 with ab253197 at 1/4000 dilution (0.158 ug/ml) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on human kidney (PMID: 11809720). The section was incubated with ab253197 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins



Immunoprecipitation - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 was immunoprecipitated from 0.35 mg of 293T (human embryonic kidney epithelial cell), whole cell lysate with ab253197 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab253197 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/5000 dilution. Lane 1: 293T (human embryonic kidney epithelial cell), whole cell lysate 10 µg (Input). Lane 2: ab253197 IP in 293T whole cell lysate Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab253197 in 293T whole cell lysate Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 58 seconds.

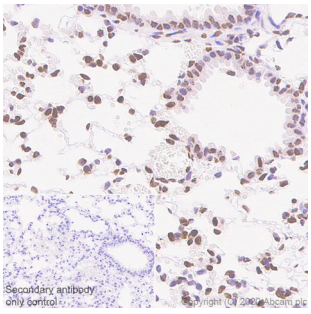
All lanes:
Immunoprecipitation - Anti-MeCP2 antibody [EPR23201-3] (ab253197) at 1/1000 dilution

All lanes:
293T (human embryonic kidney epithelial cell), whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 58s

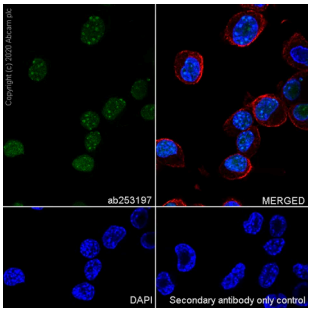


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MeCP2 antibody

Immunohistochemical analysis of paraffin-embedded Mouse lung tissue labeling MeCP2 with ab253197 at 1/4000 dilution (0.158 ug/ml) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on mouse lung (PMID: 11809720). The section was incubated with ab253197 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

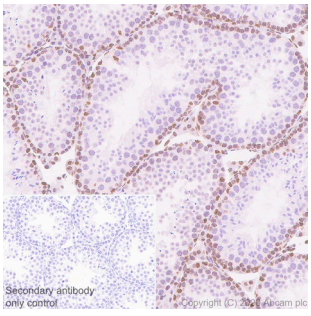
Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins



Immunocytochemistry/ Immunofluorescence - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-MeCP2 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Neuro-2a cells labelling MeCP2 with ab253197 at 1/500 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing nuclear staining in Neuro-2a cells. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5 dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1000 2 ug/ml dilution.



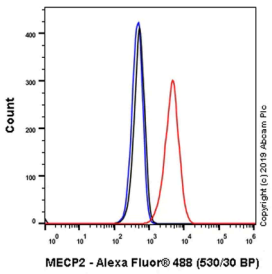
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MeCP2 antibody

Immunohistochemical analysis of paraffin-embedded Mouse testis tissue labeling MeCP2 with ab253197 at 1/4000 dilution (0.158 ug/ml) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on mouse testis (PMID: 11809720). The section was incubated with ab253197 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

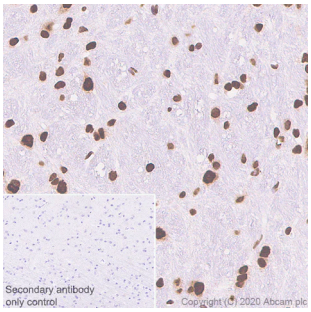
Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins



Flow Cytometry (Intracellular) - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 Flow Cytometry (Intracellular) staining using rabbit Anti-MeCP2 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Neuro-2a (Mouse neuroblastoma neuroblast) cells labelling MeCP2 with ab253197 at 1/600 dilution (0.1ug) (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.

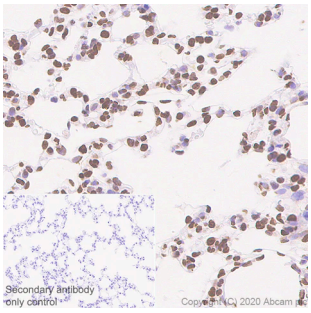


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MeCP2 antibody

Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labeling MeCP2 with ab253197 at 1/4000 dilution (0.158 ug/ml) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on rat cerebrum (PMID: 11809720). The section was incubated with ab253197 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MeCP2 antibody

Immunohistochemical analysis of paraffin-embedded Rat lung tissue labeling MeCP2 with ab253197 at 1/4000 dilution (0.158 ug/ml) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on rat lung (PMID: 11809720). The section was incubated with ab253197 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins



Immunoprecipitation - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

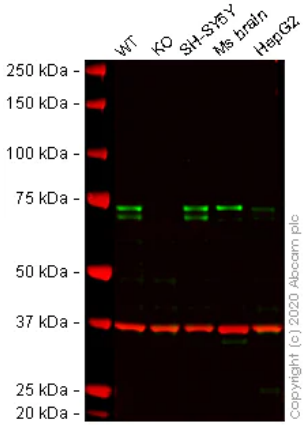
MeCP2 was immunoprecipitated from 0.35 mg of Neuro-2a (mouse neuroblastoma neuroblast), whole cell lysate with ab253197 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab253197 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/5000 dilution. Lane 1: Neuro-2a whole cell lysate 10 µg (Input). Lane 2: ab253197 IP in Neuro-2a whole cell lysate. Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab253197 in Neuro-2a whole cell lysate. Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 58 seconds.
All lanes:
Immunoprecipitation - Anti-MeCP2 antibody [EPR23201-3] (ab253197) at 1/1000 dilution

All lanes:
Neuro-2a (mouse neuroblastoma neuroblast), whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 58s



Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

Lanes 1 - 5: Merged signal (red and green). Green - ab253197 observed at 68-70 kDa. Red - loading control, ab8245 (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.
ab253197 was shown to react with MeCP2 in wild-type HAP1 cells in western blot. Loss of signal was observed when MECP2 knockout sample was used. Wild-type and MECP2 knockout HAP1 cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBS-T (0.1% Tween®) before incubation with ab253197 and ab8245 (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197) at 1/1000 dilution

Lane 1:
Wild-type HAP1 cell lysate at 20 µg

Lane 2:
MECP2 knockout HAP1 cell lysate at 20 µg

Lane 3:
SH-SY5Y cell lysate at 20 µg

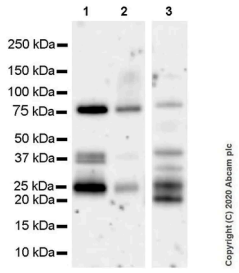
Lane 4:
Mouse Brain cell lysate at 20 µg

Lane 5:
HepG2 cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 52 kDa

Observed band size: 68-70 kDa



Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

Blocking and diluting buffer and concentration: 5% NFDM/TBST This blot was developed using a higher sensitivity ECL substrate.
The lower bands below 75kDa should be degraded MeCP2 fragments(PMID:31601272), freshly prepared lysates were recommended to use in avoid of target protein degradation.

Exposure time: 3 minutes

All lanes:
Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197) at 1/1000 dilution

Lane 1:
Human brain tissue lysate at 20 µg

Lane 2:
Human hippocampus tissue lysate at 20 µg

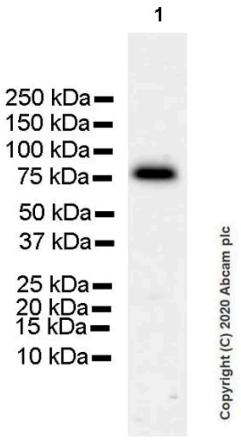
Lane 3:
Human liver tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 52 kDa

Observed band size: 75 kDa



Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

Blocking and diluting buffer and concentration: 5% NFDM/TBST
This antibody specifically recognizes MeCP2 protein at around 75kDa (PMID: 27995568, PMID: 28394263)

Exposure time: 114 seconds

All lanes:
Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197) at 1/1000 dilution

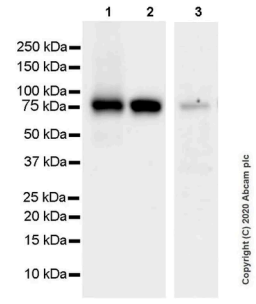
All lanes:
SH-SY5Y (human neuroblastoma epithelial cell), whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 52 kDa

Observed band size: 75 kDa



Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

Blocking and diluting buffer and concentration: 5% NFDM/TBST
Exposure time: Lane1-2: 30 seconds Lane 3: 3 minutes

All lanes:
Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate at 20 µg

Lane 2:
Mouse hippocampus tissue lysate at 20 µg

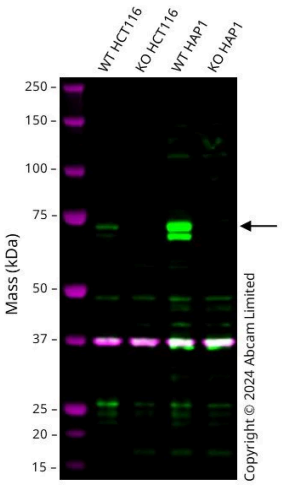
Lane 3:
Neuro-2a (mouse neuroblastoma neuroblast), whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 52 kDa

Observed band size: 75 kDa



Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

MeCP2 Western blot staining using rabbit Anti-MeCP2 antibody

Western blot: Rabbit Monoclonal[EPR23201-3] to MeCP2 ab253197 staining at 1/1000 dilution, shown in green; Mouse anti GAPDH (ab8245) loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 52 kDa in Wild-type HCT 116 ab288559 cell lysates with no signal observed at this size in MECP2 knockout HCT 116 ab289193 cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5pc 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-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197) at 1/1000 dilution

Lane 1:
Wild-type HCT 116 ab288559 at 20 µg

Lane 2:
Western blot - Human MECP2 knockout HCT116 cell line (ab289193) at 20 µg

Lane 3:
Wild-type HAP1 at 20 µg

Lane 4:
MECP2 knockout HAP1 at 20 µg

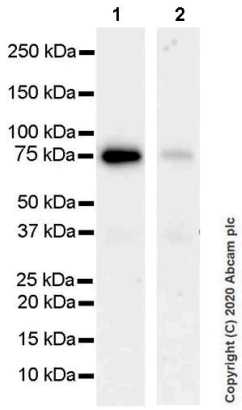
Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 52 kDa

Observed band size: 52 kDa



Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197)

Blocking and diluting buffer and concentration: 5% NFDM/TBST Exposure time: 3 minutes
All lanes:
Western blot - Anti-MeCP2 antibody [EPR23201-3] (ab253197) at 1/1000 dilution

Lane 1:
Rat brain tissue lysate at 20 µg

Lane 2:
Rat liver tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 52 kDa

Observed band size: 75 kDa

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