abcam

Product datasheet

Anti-MeCP2 antibody ab2828

27 Abreviews 86 References 5 Images

Overview

Product name	Anti-MeCP2 antibody
Description	Rabbit polyclonal to MeCP2
Host species	Rabbit
Specificity	This antibody detects methyl CpG binding protein 2 (MeCP2).
Tested applications	**Suitable for:** ICC/IF, IHC-P, WB
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Non human primates, Amphibian, Cynomolgus monkey
Immunogen	Synthetic peptide corresponding to Mouse MeCP2 aa 1-15. Sequence: MVAGMLGLREEKSED Database link: **Q9Z2D6** (Peptide available as **ab4912**) Run BLAST with Run BLAST with
Positive control	ICC/IF: C6 and C2C12 cells IHC: Rat and mouse brain tissue WB: HeLa cells
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified

Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2828 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★ (3)	1/100 - 1/200.
IHC-P	★★★★★ (1)	1/200 - 1/2000.
WB	★★★★☆ (11)	1/1500. Detects a band of approximately 56 kDa (predicted molecular weight: 52.4 kDa). Recent lots of product ab2828 should detect the untruncated protein in human samples, 75 kDa band. Earlier lots detected the truncated version (55 kDa) in human and mouse samples. However in mouse samples, only a 55 kDa band is detected by all lots of the antibody. The difference between the earlier lots and

Target

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.

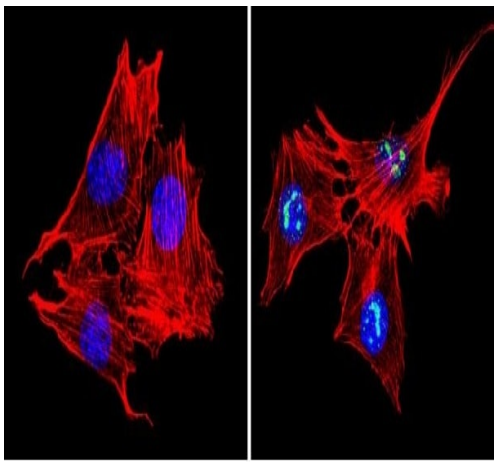
Tissue specificity Present in all adult somatic tissues tested.

Involvement in disease Defects in MECP2 may be a cause of Angelman syndrome (AS) [MIM:105830]; also known as happy puppet syndrome. AS is a neurodevelopmental disorder characterized by severe mental retardation, absent speech, ataxia, sociable affect and dysmorphic facial features. AS and Rett syndrome have overlapping clinical features.
Defects in MECP2 are the cause of mental retardation syndromic X-linked type 13 (MRXS13) [MIM:300055]. Mental retardation is a mental disorder characterized by significantly sub-average general intellectual functioning associated with impairments in adaptative behavior and manifested during the developmental period. MRXS13 patients manifest mental retardation associated with other variable features such as spasticity, episodes of manic depressive psychosis, increased tone and macroorchidism.
Defects in MECP2 are the cause of Rett syndrome (RTT) [MIM:312750]. RTT is an X-linked dominant disease, it is a progressive neurologic developmental disorder and one of the most common causes of mental retardation in females. Patients appear to develop normally until 6 to 18 months of age, then gradually lose speech and purposeful hand movements and develop microcephaly, seizures, autism, ataxia, intermittent hyperventilation, and stereotypic hand movements. After initial regression, the condition stabilizes and patients usually survive into adulthood.
Defects in MECP2 may be the cause of susceptibility autism X-linked type 3 (AUTSX3) [MIM:300496]. AUTSX3 is a pervasive developmental disorder (PDD), prototypically characterized by impairments in reciprocal social interaction and communication, restricted and stereotyped patterns of interests and activities, and the presence of developmental abnormalities

by 3 years of age.
Defects in MECP2 are the cause of encephalopathy neonatal severe due to MECP2 mutations (ENS-MECP2) [MIM:300673]. Note=The MECP2 gene is mutated in Rett syndrome, a severe neurodevelopmental disorder that almost always occurs in females. Although it was first thought that MECP2 mutations causing Rett syndrome were lethal in males, later reports identified a severe neonatal encephalopathy in surviving male sibs of patients with Rett syndrome. Additional reports have confirmed a severe phenotype in males with Rett syndrome-associated MECP2 mutations.
Defects in MECP2 are the cause of mental retardation syndromic X-linked Lubs type (MRXSL) [MIM:300260]. Mental retardation is characterized by significantly below average general intellectual functioning associated with impairments in adaptative behavior and manifested during the developmental period. MRXSL patients manifest mental retardation associated with variable features. They include swallowing dysfunction and gastroesophageal reflux with secondary recurrent respiratory infections, hypotonia, mild myopathy and characteristic facies such as downslanting palpebral fissures, hypertelorism and a short nose with a low nasal bridge. Note=Increased dosage of MECP2 due to gene duplication appears to be responsible for the mental retardation phenotype.

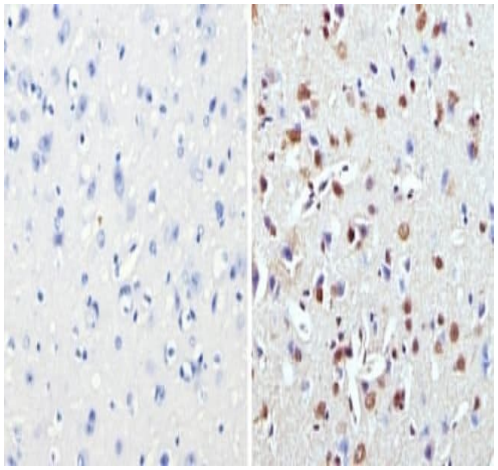
Sequence similarities	Contains 2 A.T hook DNA-binding domains. Contains 1 MBD (methyl-CpG-binding) domain.
Post-translational modifications	Phosphorylated on Ser-423 in brain upon synaptic activity, which attenuates its repressor activity and seems to regulate dendritic growth and spine maturation.
Cellular localization	Nucleus. Colocalized with methyl-CpG in the genome.

Images



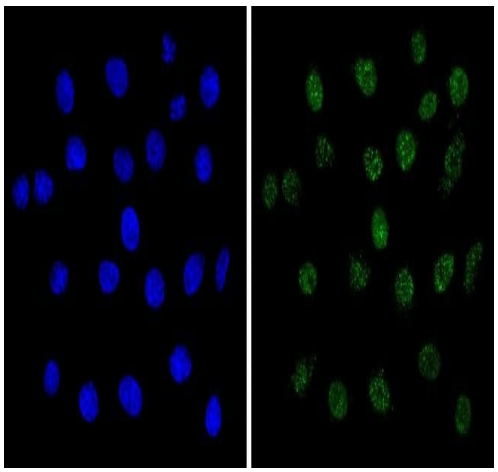
Immunocytochemistry/ Immunofluorescence - Anti-MeCP2 antibody (ab2828)

Immunocytochemistry/Immunoflorescence of C2C12 cells labeling Methyl CpG Binding Protein 2 (green) with ab2828 at a dilution of 1/200. Cells with primary antibody (right) compared to negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature.Cells were probed with polyclonal antibody in 3% BSA-PBS and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. Actin was stained using Alexa Fluor 554 (red) and nuclei were stained with Hoechst or DAPI (blue).



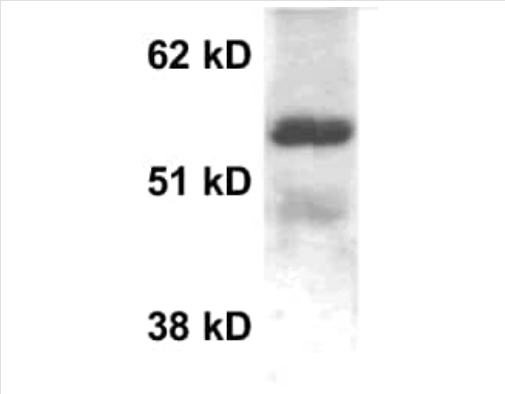
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MeCP2 antibody (ab2828)

Immunohistochemistry analysis of mouse brain tissue staining MeCP2 with ab2828 (dilution 1/1000 in 3 % BSA-PBS). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature, washed with ddH2O and PBS, and then probed with ab2828 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



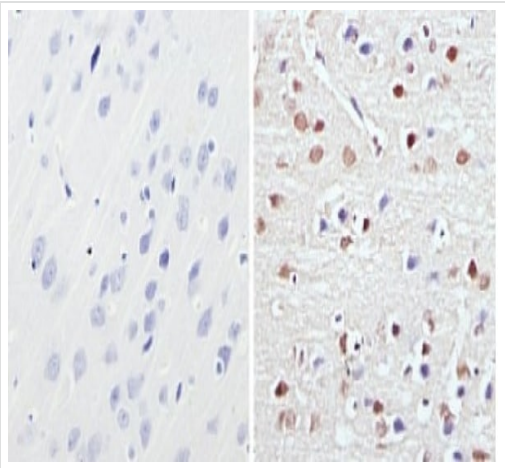
Immunocytochemistry/ Immunofluorescence - Anti-MeCP2 antibody (ab2828)

Immunocytochemistry/Immunoflorescence of C6 cells labeling Methyl CpG Binding Protein 2 (green) with ab2828 at a dilution of 1/200. Cells with primary antibody (right) compared to negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature.Cells were probed with polyclonal antibody in 3% BSA-PBS and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. Nuclei were stained with Hoechst or DAPI (blue). Images were taken at a magnification of 60x.



Western blot - Anti-MeCP2 antibody (ab2828)

Western blot using ab2828 on HeLa cells. Western blot using ab2828 on HeLa cells.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MeCP2 antibody (ab2828)

Immunohistochemistry analysis of rat brain tissue staining MeCP2 with ab2828 (dilution 1/1000 in 3 % BSA-PBS). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H_2O_2-methanol for 15 min at room temperature, washed with ddH_2O and PBS, and then probed with ab2828 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.

- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors