abcam

Product datasheet

Anti-MeCP2 antibody - ChIP Grade ab195393

1 References 2 Images

Overview

Product name	Anti-MeCP2 antibody - ChIP Grade
Description	Rabbit polyclonal to MeCP2 - ChIP Grade
Host species	Rabbit
Tested applications	**Suitable for:** WB, ChIP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human MeCP2 aa 450 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. Database link: **P51608** Run BLAST with Run BLAST with
Positive control	HeLa cell nuclear extract; chromatin from human osteosarcoma (U2OS) 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 long term. Avoid freeze / thaw cycle.
Storage buffer	Preservatives: 0.05% Sodium azide, 0.05% Proclin 300 Constituent: PBS
Purity	Affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab195393 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
WB		1/1000.
ChIP		Use 5µg for 10^6 cells.

Target

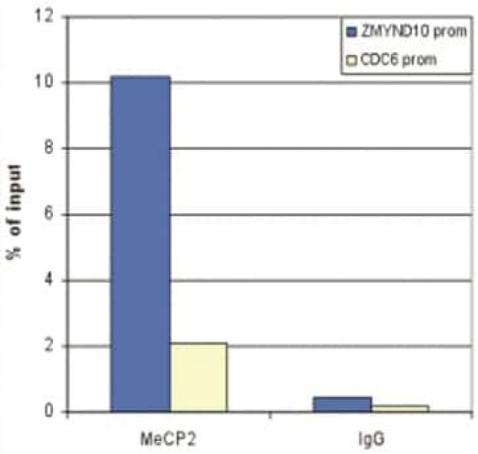
Function Chromosomal protein that binds to methylated DNA. It can bind specifically to a single methyl-CpG pair. It is not influenced by sequences flanking the methyl-CpGs. Mediates transcriptional repression through interaction with histone deacetylase and the corepressor SIN3A.

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

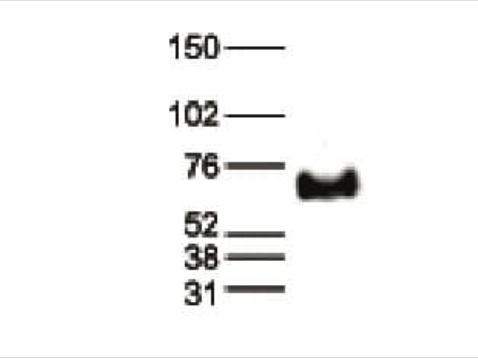
	recurrent respiratory infections, hypotonia, mild myopathy and characteristic facies such as downslanting palpebral fissures, hypertelorism and a short nose with a low nasal bridge. Note=Increased dosage of MECP2 due to gene duplication appears to be responsible for the mental retardation phenotype.
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



ChIP - Anti-MeCP2 antibody - ChIP Grade (ab195393)

ChIP assays were performed using human osteosarcoma (U2OS) cells, ab195393 and optimized PCR primer sets. Sheared chromatin from 1x10^6 cells and 5 µg of antibody were used per ChIP experiment. IgG (1 µg/IP) was used as a negative IP control. Quantitative PCR was performed with primers for the promoters of the ZMYND10 gene (used as a positive control) and CDC6 gene (used as a negative control). Image shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).



Western blot - Anti-MeCP2 antibody - ChIP Grade (ab195393)

Anti-MeCP2 antibody - ChIP Grade (ab195393) at 1/1000 dilution + nuclear extract from HeLa cells at 40 µg

TBS-Tween containing 5% skimmed milk

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