10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

MeCP2 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10164

Specification

MeCP2 Antibody - Product Information

Application	**WB**
Primary Accession	P51608
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**52441**

MeCP2 Antibody - Additional Information

Gene ID 4204

Positive Control	**Western blot: Rat Kidney lysate**
Application & Usage	**Western blot: 1:200**

Other Names
Methyl-CpG-Binding Domain 2

Target/Specificity
MeCP2

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) of antibody in PBS, 0.01 % BSA, 0.01 % thimerosal, and 50 % glycerol, pH 7.2

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
MeCP2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

MeCP2 Antibody - Protein Information

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Name 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).

Cellular Location
Nucleus {ECO:0000250|UniProtKB:Q9Z2D6}. Note=Colocalized with methyl-CpG in the genome. Colocalized with TBL1X to the heterochromatin foci.

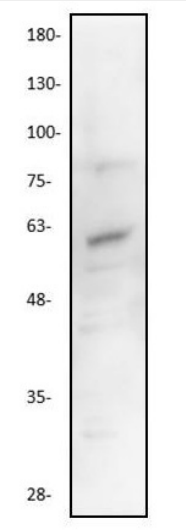
Tissue Location
Present in all adult somatic tissues tested.

MeCP2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

MeCP2 Antibody - Images



Western blot of Rat kidney lysate with MeCP2 Antibody

MeCP2 Antibody - Background

DNA methylation, or the addition of methyl groups to cytosine bases in the dinucleotide CpG, is imperative to proper development and regulates gene expression. The methylation pattern involves

the enzymatic processes of methylation and demethylation. A demethylase enzyme has been identified which exhibits demethylase activity associated to a methyl-CpG-binding domain (MBD). The enzyme is able to revert methylated cytosine bases to cytosines within the particular dinucleotide sequence mdCpdG by catalyzing the cleaving of the methyl group as methanol. MeCP2 and MBD1 (PCM1) repress transcription by binding specifically to methylated DNA. MBD2 and MBD4 (also known as MED1) co-localize with foci of heavily methylated satellite DNA and mediate the biological functions of the methylation signal. Surprisingly, MBD3 does not bind methylated DNA either in vivo or in vitro. MBD1, MBD2, MBD3, and MBD4 are expressed in somatic tissues, but the expression of MBD1 and MBD2 is reduced or absent in embryonic stem cells, which are known to be deficient in MeCP1 activity. MBD4 has homology to bacterial base excision repair DNA N-glycosylases/lyases. In some microsatellite unstable tumors, MBD4 is mutated at an exonic polynucleotide tract.