

## **MeCP2 Antibody**

Rabbit Polyclonal Antibody Catalog # ABV10164

## **Specification**

## **MeCP2 Antibody - Product Information**

Application Primary Accession Reactivity

Host Clonality Isotype

Calculated MW

WB

P51608

Human, Mouse, Rat

Western blot: 1:200

Western blot: Rat Kidney lysate

Rabbit Polyclonal Rabbit IgG 52441

## **MeCP2 Antibody - Additional Information**

**Gene ID 4204** 

Positive Control
Application & Usage
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** 



### 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**

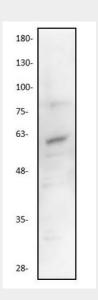
Present in all adult somatic tissues tested.

## **MeCP2 Antibody - Protocols**

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- <u>Immunoprecipitation</u>
- 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





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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.