

#### MBD1 Antibody

Rabbit Polyclonal Antibody Catalog # ABV10221

### Specification

# MBD1 Antibody - Product Information

Application Primary Accession Reactivity Host Clonality Isotype Calculated MW WB <u>Q9UIS9</u> Human, Mouse Rabbit Polyclonal Rabbit IgG 66607

# MBD1 Antibody - Additional Information

Gene ID 4152

Application & Usage

Western blot analysis (0.5-4  $\mu$ g/ml). However, the optimal conditions should be determined individually. Cross activity to perforin of other species has not been determined.

**Other Names** CXXC-type zinc finger protein 3, Methyl-CpG-binding protein MBD1, Protein containing methyl-CpG-binding domain 1

Target/Specificity MBD1

Antibody Form Liquid

Appearance Colorless liquid

**Formulation** 100  $\mu$ g (0.5 mg/ml) affinity purified rabbit anti- MBD1 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 5 mM EDTA and 0.01% thimerosal.

Handling The antibody solution should be gently mixed before use.

Reconstitution & Storage -20 °C

**Background Descriptions** 

Precautions



MBD1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### MBD1 Antibody - Protein Information

Name MBD1 (HGNC:6916)

Synonyms CXXC3, PCM1

#### Function

Transcriptional repressor that binds CpG islands in promoters where the DNA is methylated at position 5 of cytosine within CpG dinucleotides. Binding is abolished by the presence of 7-mG that is produced by DNA damage by methylmethanesulfonate (MMS). Acts as transcriptional repressor and plays a role in gene silencing by recruiting ATF7IP, which in turn recruits factors such as the histone methyltransferase SETDB1. Probably forms a complex with SETDB1 and ATF7IP that represses transcription and couples DNA methylation and histone 'Lys-9' trimethylation. Isoform 1 and isoform 2 can also repress transcription from unmethylated promoters.

#### **Cellular Location**

Nucleus. Nucleus matrix. Nucleus speckle Chromosome Note=Nuclear, in a punctate pattern (PubMed:12711603). Associated with euchromatic regions of the chromosomes, with pericentromeric regions on chromosome 1 and with telomeric regions from several chromosomes (PubMed:10648624, PubMed:10454587).

**Tissue Location** Widely expressed..

#### **MBD1 Antibody - Protocols**

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

MBD1 Antibody - Images





Western blot analysis of MBD1 using Jurkat cell lysate.

# MBD1 Antibody - Background

The MBD family of proteins includes MeCP2, MBD1, MBD2, MBD3 and MBD4. MBD1 (methyl-CpG binding domain protein 1) binds to methylated CpG sites and represses gene transcription. MBD1 is recruited to both methylated and non-methylated CpGs by separate domains: the CXXC domain targets the protein to non-methylated CpGs whereas the MBD domain targets the protein to methylated CpG. MBD1 may also interact with histone methyltransferase SETDB1 to repress transcription.