

MBD2/3 (Clone 106B691) Antibody
Mouse Monoclonal Antibody
Catalog # ABV11102**Specification**

MBD2/3 (Clone 106B691) Antibody - Product Information

Application	WB
Primary Accession	O95983
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1κ
Calculated MW	32844

MBD2/3 (Clone 106B691) Antibody - Additional Information**Gene ID** 53615

Positive Control	HeLa cell nuclear fraction
Application & Usage	Western blot analysis (2-4 µg/ml). However, the optimal conditions should be determined individually.

Other Names

Methyl-CpG-Binding Domain 2/3

Target/Specificity

MBD2/3

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

50 µg in 100 µl PBS containing 0.2% gelatin and 0.05% sodium azide

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

MBD2/3 (Clone 106B691) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

MBD2/3 (Clone 106B691) Antibody - Protein Information

Name MBD3

Function

Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed:16428440, PubMed:12124384, PubMed:16428440, PubMed:28977666). Acts as transcriptional repressor and plays a role in gene silencing (PubMed:10947852, PubMed:18644863). Does not bind to methylated DNA by itself (PubMed:12124384, PubMed:16428440). Binds to a lesser degree DNA containing unmethylated CpG dinucleotides (PubMed:24307175). Recruits histone deacetylases and DNA methyltransferases.

Cellular Location

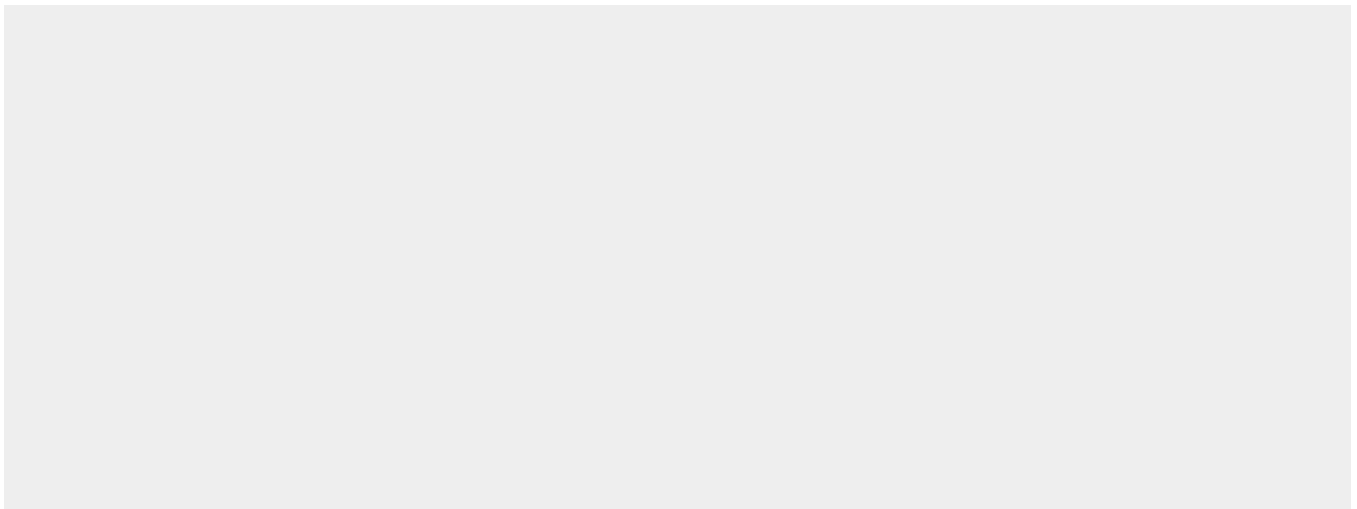
Nucleus. Chromosome. Note=Nuclear, in discrete foci. Detected on chromatin, at promoter regions of active genes

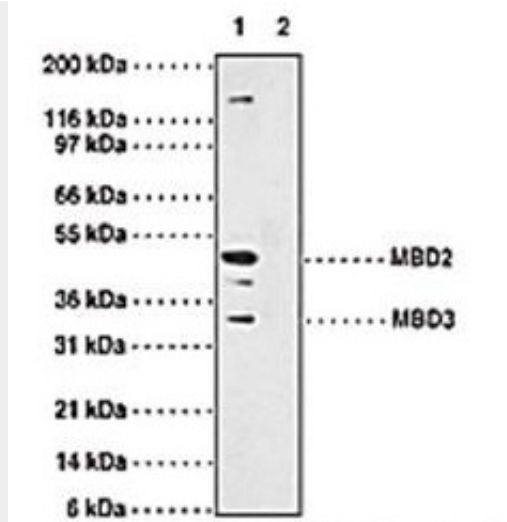
MBD2/3 (Clone 106B691) Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

MBD2/3 (Clone 106B691) Antibody - Images





Lane1:HeLa cell nuclear fraction(Absence of Immunizing peptide; Lane2:HeLa cell nuclear fraction(Presence of Immunizing peptide)

MBD2/3 (Clone 106B691) 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.