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MBD2 Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19883C

Specification

MBD2 Antibody (Center) - Product Information

Application	**WB, IF,E**
Primary Accession	Q9UBB5
Other Accession	Q9Z2E1, NP_056647.1
Reactivity	**Human**
Predicted	**Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**43255**
Antigen Region	**250-279**

MBD2 Antibody (Center) - Additional Information

Gene ID 8932

Other Names
Methyl-CpG-binding domain protein 2, Demethylase, DMTase, Methyl-CpG-binding protein MBD2, MBD2

Target/Specificity
This MBD2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 250-279 amino acids from the Central region of human MBD2.

Dilution
WB~~1:1000
IF~~1:10~50
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
MBD2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

MBD2 Antibody (Center) - Protein Information

Name MBD2 (HGNC:6917)

Function Binds CpG islands in promoters where the DNA is methylated at position 5 of cytosine within CpG dinucleotides (PubMed:9774669). Binds hemimethylated DNA as well (PubMed:10947852, PubMed:24307175). Recruits histone deacetylases and DNA methyltransferases to chromatin (PubMed:10471499, PubMed:10947852). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed:16428440, PubMed:28977666). Acts as a transcriptional repressor and plays a role in gene silencing (PubMed:10471499, PubMed:10947852, PubMed:16415179). Functions as a scaffold protein, targeting GATAD2A and GATAD2B to chromatin to promote repression (PubMed:16415179). May enhance the activation of some unmethylated cAMP-responsive promoters (PubMed:12665568).

Cellular Location
Nucleus. Chromosome Note=Nuclear, in discrete foci (PubMed:12183469). Detected at replication foci in late S phase. Localizes to methylated chromatin (PubMed:16428440). Localizes to sites of DNA damage in a manner partially dependent on ZMYND8 (PubMed:27732854)

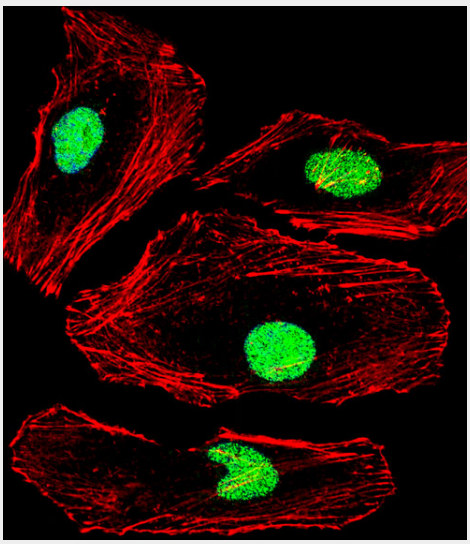
Tissue Location
Highly expressed in brain, heart, kidney, stomach, testis and placenta.

MBD2 Antibody (Center) - 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

MBD2 Antibody (Center) - Images



Fluorescent confocal image of Hela cell stained with MBD2 Antibody

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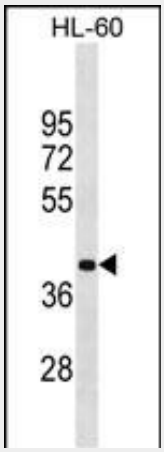
(Center)(Cat#AP19883c).Hela cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with MBD2 primary antibody (1:25, 1 h at 37℃). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37℃).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37℃). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min).MBD2 immunoreactivity is localized to Nucleus significantly.



MBD2 Antibody (Center) (Cat. #AP19883c) western blot analysis in HL-60 cell line lysates (35ug/lane).This demonstrates the MBD2 antibody detected the MBD2 protein (arrow).

MBD2 Antibody (Center) - Background

DNA methylation is the major modification of eukaryotic genomes and plays an essential role in mammalian development. Human proteins MECP2, MBD1, MBD2, MBD3, and MBD4 comprise a family of nuclear proteins related by the presence in each of a methyl-CpG binding domain (MBD). Each of these proteins, with the exception of MBD3, is capable of binding specifically to methylated DNA. MECP2, MBD1 and MBD2 can also repress transcription from methylated gene promoters. The protein encoded by this gene may function as a mediator of the biological consequences of the methylation signal. It is also reported that the this protein functions as a demethylase to activate transcription, as DNA methylation causes gene silencing.

MBD2 Antibody (Center) - References

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McDonough, C.W., et al. Hum. Genet. (2009) In press :
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