

Anti-MBD2 Antibody
Catalog # ABO12732**Specification**

Anti-MBD2 Antibody - Product Information

Application	WB
Primary Accession	Q9UBB5
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Methyl-CpG-binding domain protein 2(MBD2) detection. Tested with WB in Human.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-MBD2 Antibody - Additional Information

Gene ID 8932

Other Names

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

Calculated MW

43255 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization

Nucleus . Nuclear, in discrete foci. Detected at replication foci in late S phase.

Tissue Specificity

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

Protein Name

Methyl-CpG-binding domain protein 2

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃N.

Immunogen

E.coli-derived human MBD2 recombinant protein (Position: W159-A411). Human MBD2 shares 98% amino acid (aa) sequence identity with mouse MBD2.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Contains 1 MBD (methyl-CpG-binding) domain.

Anti-MBD2 Antibody - 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](http://www.uniprot.org/citations/9774669)). Binds hemimethylated DNA as well (PubMed:[10947852](http://www.uniprot.org/citations/10947852), PubMed:[24307175](http://www.uniprot.org/citations/24307175)). Recruits histone deacetylases and DNA methyltransferases to chromatin (PubMed:[10471499](http://www.uniprot.org/citations/10471499), PubMed:[10947852](http://www.uniprot.org/citations/10947852)). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed:[16428440](http://www.uniprot.org/citations/16428440), PubMed:[28977666](http://www.uniprot.org/citations/28977666)). Acts as a transcriptional repressor and plays a role in gene silencing (PubMed:[10471499](http://www.uniprot.org/citations/10471499), PubMed:[10947852](http://www.uniprot.org/citations/10947852), PubMed:[16415179](http://www.uniprot.org/citations/16415179), PubMed:[16415179](http://www.uniprot.org/citations/16415179)). Functions as a scaffold protein, targeting GATAD2A and GATAD2B to chromatin to promote repression (PubMed:[16415179](http://www.uniprot.org/citations/16415179)). May enhance the activation of some unmethylated cAMP-responsive promoters (PubMed:[12665568](http://www.uniprot.org/citations/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.

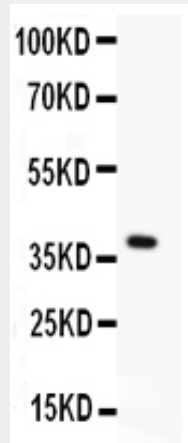
Anti-MBD2 Antibody - Protocols

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

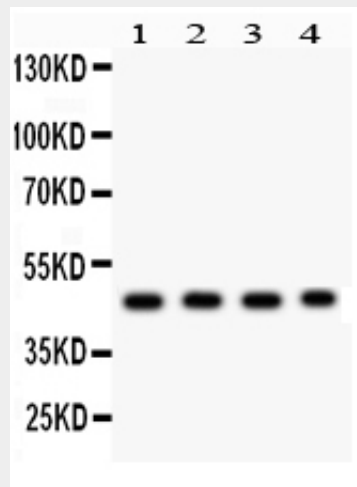
- [Western Blot](#)
- [Blocking Peptides](#)

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

Anti-MBD2 Antibody - Images



Anti- MBD2 antibody, ABO12732, Western blotting All lanes: Anti MBD2 (ABO12732) at 0.5ug/ml WB: Recombinant Human MBD2 Protein 0.5ng Predicted bind size: 40KD Observed bind size: 40KD



Anti- MBD2 antibody, ABO12732, Western blotting All lanes: Anti MBD2 (ABO12732) at 0.5ug/ml Lane 1: SGC Whole Cell Lysate at 40ug Lane 2: HELA Whole Cell Lysate at 40ug Lane 3: JURKAT Whole Cell Lysate at 40ug Lane 4: K562 Whole Cell Lysate at 40ug Predicted bind size: 47KD Observed bind size: 47KD

Anti-MBD2 Antibody - Background

Methyl-CpG-binding domain protein 2 is a protein that in humans is encoded by the MBD2 gene. It is mapped to 18q21.2. 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. DNA methylation is the major modification of eukaryotic genomes and plays an essential role in mammalian development. The protein encoded by this gene may function as a mediator of the

biological consequences of the methylation signal. It is also reported that this protein functions as a demethylase to activate transcription, as DNA methylation causes gene silencing.