10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-MBD2 Antibody

Catalog # ABO12732

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.

Additional Information

Gene ID	8932
Other Names	Methyl-CpG-binding domain protein 2, Demethylase, DMTase, Methyl-CpG-binding protein MBD2, MBD2
Calculated MW	43255
Application Details	Western blot, 0.1-0.5 □g/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. .
Source	Eukaryota
Protein Name	Methyl-CpG-binding domain protein 2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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 r˚Constitution, 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.

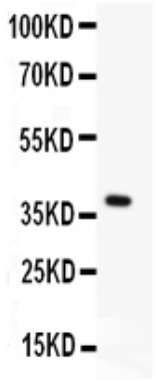
Protein Information

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.

Background

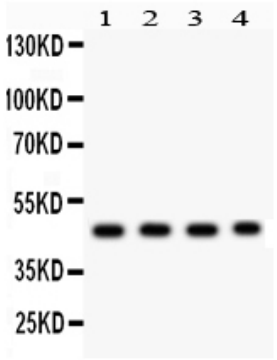
Methyl-CpG-binding domain protein 2 is a protein that in humans is encoded by the MBD2 gene. It is mapped to 18q21.2. Human proteins MECP2, MBD1, MBD2, MBD3, and MBD4 comprise a family of nuclear proteins related by the presence in each of a methyl-CpG-binding domain (MBD). Each of these proteins, with 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.

Images



Anti- MBD2 antibody, ABO12732, Western blottingAll lanes: Anti MBD2 (ABO12732) at 0.5ug/mlWB: Recombinant Human MBD2 Protein 0.5ngPredicted bind size: 40KDObserved bind size: 40KD

Anti- MBD2 antibody, ABO12732, Western blottingAll lanes: Anti MBD2 (ABO12732) at 0.5ug/mlLane 1: SGC



Whole Cell Lysate at 40ugLane 2: HELA Whole Cell Lysate at 40ugLane 3: JURKAT Whole Cell Lysate at 40ugLane 4: K562 Whole Cell Lysate at 40ugPredicted bind size: 47KDObserved bind size: 47KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.