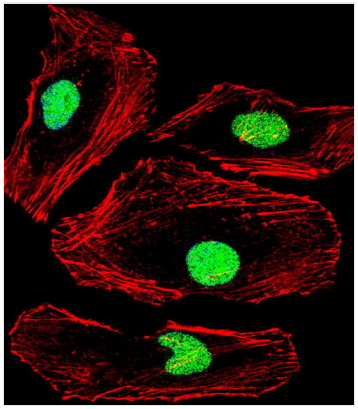
MBD2 Antibody – Rabbit Polyclonal

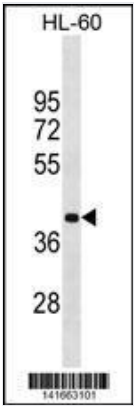
PRODUCT OVERVIEW

Product Name	MBD2, Polyclonal Antibody
Full Product Name	MBD2, ID (MBD2, Methyl-CpG-binding domain protein 2, Demethylase, Methyl-CpG-binding protein MBD2)
Product Gene Name	anti-MBD2 antibody
Product Synonym Names	Anti -MBD2, ID (MBD2, Methyl-CpG-binding domain protein 2, Demethylase, Methyl-CpG-binding protein MBD2)
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2, 0.09% sodium azide.
Purity/Purification	Affinity Purified Purified by Protein A affinity chromatography.
Specificity	Human
Preparation and Storage	May be stored at 4 degree C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20 degree C. Aliquots are stable for 12 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	43,255 Da
Chromosome Location	Chromosome: 18; NC_000018.9 (51677971..51751158, complement). Location: 18q21
OMIM	603547
3D Structure	ModBase 3D Structure for Q9UBB5
Immunogen	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.
Product Categories/Family for anti-MBD2 antibody	Antibodies; Abs to Binding Proteins
Applications Tested/Suitable for anti-MBD2 antibody	ELISA (EL/EIA), Western Blot (WB)
Application Notes for anti-MBD2 antibody	Suitable for use in Western Blot, ELISA Dilution: ELISA: 1:1,000 Western Blot: 1:100-500
Related Product Information for anti-MBD2 antibody	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.
Other Notes	Small volumes of anti-MBD2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for MBD2 purchase	MBS6004864 is an antibody targeting MBD2. Also known as MBD2, ID (MBD2, Methyl-CpG-binding domain protein 2, Demethylase, Methyl-CpG-binding protein MBD2). Reactive in Human. Host: Rabbit.



Immunofluorescence (IF) of anti-MBD2 antibody
Fluorescent confocal image of Hela cell stained with MBD2 Antibody (Center).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.



Western Blot (WB) of anti-MBD2 antibody
MBD2 Antibody (Center) western blot analysis in HL-60 cell line lysates (35ug/lane).This demonstrates the MBD2 antibody detected the MBD2 protein (arrow).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MBD2. It may not necessarily be applicable to this product.

NCBI GI #	7710145
NCBI GeneID	8932
NCBI Accession #	NP_056647.1
UniProt Primary Accession #	Q9UBB5
UniProt Secondary Accession #	O95242; Q9UIS8
UniProt Related Accession #	Q9UBB5
GenBank Nucleotide #	NM_015832.4
NCBI Official Full Name	methyl-CpG-binding domain protein 2 testis-specific isoform
NCBI Official Synonym Full Names	methyl-CpG binding domain protein 2
NCBI Official Symbol	MBD2
NCBI Official Synonym Symbols	DMTase; NY-CO-41
UniProt Protein Name	Methyl-CpG-binding domain protein 2
UniProt Synonym Protein Names	Demethylase; DMTase; Methyl-CpG-binding protein MBD2
Protein Family	Methyl-CpG-binding domain-containing protein
UniProt Gene Name	MBD2
UniProt Synonym Gene Names	DMTase
UniProt Entry Name	MBD2_HUMAN
NCBI Protein Information	methyl-CpG-binding domain protein 2; demethylase

NCBI Summary for MBD2	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. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Feb 2011]
UniProt Comments for MBD2	MBD2: Binds CpG islands in promoters where the DNA is methylated at position 5 of cytosine within CpG dinucleotides. Binds hemimethylated DNA as well. Recruits histone deacetylases and DNA methyltransferases. Acts as transcriptional repressor and plays a role in gene silencing. May enhance the activation of some unmethylated cAMP-responsive promoters. 2 isoforms of the human protein are produced by alternative splicing. Chromosomal Location of Human Ortholog: 18q21 Cellular Component: nucleoplasm; heterochromatin; protein complex; cytoplasm; histone deacetylase complex; nuclear chromatin; nucleus Molecular Function: mRNA binding; protein domain specific binding; protein binding; nucleosomal DNA binding; siRNA binding; methyl-CpG binding; satellite DNA binding Biological Process: cellular protein complex assembly; transcription, DNA-dependent; maternal behavior; negative regulation of gene expression, epigenetic; ATP-dependent chromatin remodeling; gene expression; negative regulation of transcription from RNA polymerase II promoter; negative regulation of transcription, DNA-dependent; positive regulation of Wnt receptor signaling pathway; regulation of gene expression, epigenetic; regulation of cell proliferation
Research Articles on MBD2	**1.** MBD3 is enriched at active promoters, whereas MBD2 is bound at methylated promoters and enriched at exon sequences of active genes.
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