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MBD3 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13755a

Product Information

Application	WB, E
Primary Accession	O95983
Other Accession	Q9Z2D8, NP_003917.1
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33769
Calculated MW	32844
Antigen Region	1-30

Additional Information

Gene ID	53615
Other Names	Methyl-CpG-binding domain protein 3, Methyl-CpG-binding protein MBD3, MBD3
Target/Specificity	This MBD3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human MBD3.
Dilution	WB~~1:1000 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	MBD3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MBD3
Function	Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (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

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). However, unlike the other family members, MBD3 is not capable of binding to methylated DNA. The predicted MBD3 protein shares 71% and 94% identity with MBD2 (isoform 1) and mouse Mbd3. MBD3 is a subunit of the NuRD, a multisubunit complex containing nucleosome remodeling and histone deacetylase activities. MBD3 mediates the association of metastasis-associated protein 2 (MTA2) with the core histone deacetylase complex.

References

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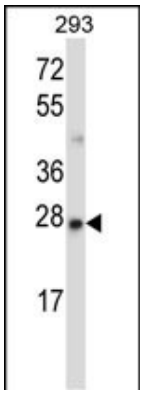
Morey, L., et al. Mol. Cell. Biol. 28(19):5912-5923(2008)
Brown, S.E., et al. Gene 420(2):99-106(2008)
Spensberger, D., et al. Biochemistry 47(24):6418-6426(2008)

Images



MBD3 Antibody (N-term) (Cat. #AP13755a) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the MBD3 antibody detected the MBD3 protein (arrow).