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MeCP2 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2545a

Product Information

Application	WB, FC, E
Primary Accession	P51608
Other Accession	Q95LG8
Reactivity	Human
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB2387
Calculated MW	52441
Antigen Region	1-30

Additional Information

Gene ID	4204
Other Names	Methyl-CpG-binding protein 2, MeCp-2 protein, MeCp2, MECP2
Target/Specificity	This MeCP2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human MeCP2.
Dilution	WB~~1:500 FC~~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 prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	MeCP2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MECP2
Function	Chromosomal protein that binds to methylated DNA. It can bind specifically to a single methyl-CpG pair. It is not influenced by sequences flanking the methyl-CpGs. Mediates transcriptional repression through interaction with

	histone deacetylase and the corepressor SIN3A. Binds both 5-methylcytosine (5mC) and 5-hydroxymethylcytosine (5hmC)- containing DNA, with a preference for 5-methylcytosine (5mC).
Cellular Location	Nucleus {ECO:0000250|UniProtKB:Q9Z2D6}. Note=Colocalized with methyl-CpG in the genome. Colocalized with TBL1X to the heterochromatin foci.
Tissue Location	Present in all adult somatic tissues tested.

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. In contrast to other MBD family members, MECP2 is X-linked and subject to X inactivation. MECP2 is dispensible in stem cells, but is essential for embryonic development. MECP2 gene mutations are the cause of some cases of Rett syndrome, a progressive neurologic developmental disorder and one of the most common causes of mental retardation in females.

References

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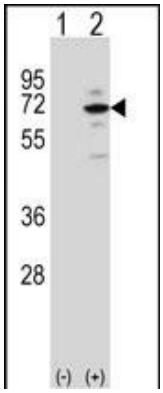
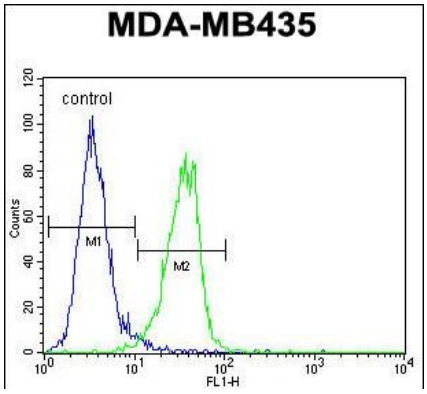
Ylisaukko-Oja, T., et al., Am J Med Genet A 132(2):121-124 (2005).
Schanen, C., et al., Am J Med Genet A 126(2):129-140 (2004).
Shibayama, A., et al., Am. J. Med. Genet. B Neuropsychiatr. Genet. 128(1):50-53 (2004).
Fang, J.Y., et al., World J. Gastroenterol. 10(23):3394-3398 (2004).

Images



Western blot analysis of MeCP2 (arrow) using rabbit polyclonal MeCP2 Antibody (E11) (Cat. #AP2545a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the MeCP2 gene.



MeCP2 Antibody (N-term) (Cat. #AP2545a) flow cytometric analysis of MDA-MB435 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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