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Phospho-MeCP2(S80) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3595a

Product Information

Application	DB, E
Primary Accession	P51608
Other Accession	Q00566, Q9Z2D6, Q95LG8
Reactivity	Human
Predicted	Mouse, Monkey, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	52441

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 phosphopeptide corresponding to amino acid residues surrounding S80 of human MeCP2.
Dilution	DB~~1:500 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	Phospho-MeCP2(S80) Antibody 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.

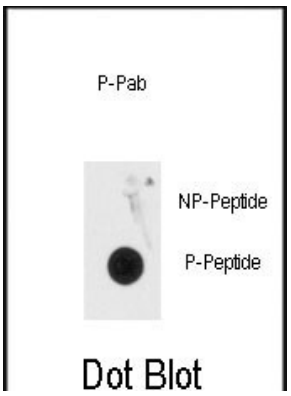
Background

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

Mnatzakanian, G.N., et al., Nat. Genet. 36(4):339-341 (2004).
Laccone, F., et al., Hum. Mutat. 23(3):234-244 (2004).
Suzuki, M., et al., Oncogene 22(54):8688-8698 (2003).
Balmer, D., et al., J. Mol. Med. 81(1):61-68 (2003).
Hagberg, B., et al., Eur. J. Paediatr. Neurol. 7(6):417-421 (2003).

Images



Dot blot analysis of anti-Phospho-MeCP2-pS80 Antibody (Cat.#AP3595a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Citations

- Expression of Phospho-MeCP2s in the Developing Rat Brain and Function of Postnatal MeCP2 in Cerebellar Neural Cell Development.