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MeCP2 Antibody (S421) Blocking Peptide
Synthetic peptide
Catalog # BP2545d

Specification

MeCP2 Antibody (S421) Blocking Peptide - Product Information

Primary Accession Q95LG8

MeCP2 Antibody (S421) Blocking Peptide - Additional Information

Other Names
Methyl-CpG-binding protein 2, MeCp-2 protein, MeCp2, MECP2

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2545d was selected from the S421 region of human MeCP2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MeCP2 Antibody (S421) Blocking Peptide - 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. {ECO:0000250|UniProtKB:P51608}

MeCP2 Antibody (S421) Blocking Peptide - Protocols

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Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

MeCP2 Antibody (S421) Blocking Peptide - Images

MeCP2 Antibody (S421) Blocking Peptide - 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.

MeCP2 Antibody (S421) Blocking Peptide - References

dos Santos, J.M., et al., Neurosci. Lett. 379(1):13-16 (2005).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).

MeCP2 Antibody (S421) Blocking Peptide - Citations

- The significance of the increased expression of phosphorylated MeCP2 in the membranes from patients with proliferative diabetic retinopathy.