10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Phospho-MeCP2(S421) Antibody Blocking peptide

Synthetic peptide
Catalog # BP3693a

Specification

Phospho-MeCP2(S421) Antibody Blocking peptide - Product Information

Primary Accession P51608

Phospho-MeCP2(S421) Antibody Blocking peptide - Additional Information

Gene ID 4204

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

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.

Phospho-MeCP2(S421) Antibody 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.

Tissue Location
Present in all adult somatic tissues tested.

Phospho-MeCP2(S421) Antibody Blocking peptide - Protocols

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

- Blocking Peptides

Phospho-MeCP2(S421) Antibody Blocking peptide - Images

Phospho-MeCP2(S421) Antibody 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.

Phospho-MeCP2(S421) Antibody Blocking peptide - 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).