

**Phospho-Ser421 Methyl-CpG Binding Protein 2 (MeCP2) Antibody**  
**Rabbit polyclonal antibody**  
**Catalog # AN1238****Specification**

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**Phospho-Ser421 Methyl-CpG Binding Protein 2 (MeCP2) Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">Q9Z2D6</a>
Reactivity	Mouse
Predicted	Human, Monkey
Host	Rabbit
Clonality	polyclonal

**Phospho-Ser421 Methyl-CpG Binding Protein 2 (MeCP2) Antibody - Additional Information**

Gene ID	17257
Gene Name	MECP2
<b>Other Names</b>	
Methyl-CpG-binding protein 2, MeCp-2 protein, MeCp2, Mecp2	

**Target/Specificity**

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser421 conjugated to KLH.

**Dilution**

WB~~ 1:1000

**Format**

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho and dephosphopeptide affinity columns.

**Antibody Specificity**

Specific for the ~55 kDa truncated MeCP2 protein phosphorylated at Ser421. Immunolabeling of the MeCP2 band is blocked by preadsorption with the phospho-peptide used as antigen but not by the corresponding dephospho-peptide.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Phospho-Ser421 Methyl-CpG Binding Protein 2 (MeCP2) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Shipping**

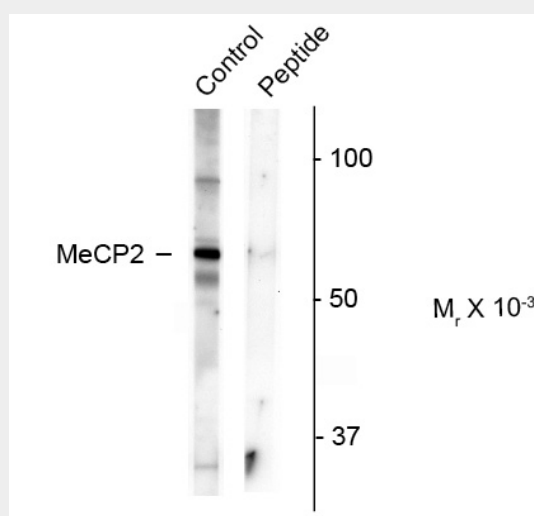
Blue Ice

## Phospho-Ser421 Methyl-CpG Binding Protein 2 (MeCP2) Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Phospho-Ser421 Methyl-CpG Binding Protein 2 (MeCP2) Antibody - Images



Western blot of mouse whole brain showing specific immunolabeling of the ~55k truncated MeCP2 protein phosphorylated at Ser421. Immunolabeling is greatly reduced by preadsorption with the phospho-peptide used as antigen (peptide), but not by the corresponding dephospho-peptide (not shown).

## Phospho-Ser421 Methyl-CpG Binding Protein 2 (MeCP2) Antibody - Background

MeCP2 (Methyl-CpG Binding Protein 2) is a chromosomal protein that binds to methylated DNA. It can bind specifically to a single methyl-CpG pair and is not influenced by sequences flanking the methyl-CpGs. MeCP2 has been shown to mediate transcriptional repression through interaction with histone deacetylase and the corepressor SIN3A (Nan et al., 1998). Defects in MeCP2 are the cause of Rett syndrome (RTT) (Amir et al., 1999). RTT is an X-linked dominant disease; it is a progressive neurologic developmental disorder and one of the most common causes of mental retardation in females. Recent studies have reported a new phosphorylation site at Ser421. Phosphorylation and dephosphorylation of this site may be involved in regulation of behavioral responses to chronic antidepressant treatment (Hutchinson et al., 2012).

## Phospho-Ser421 Methyl-CpG Binding Protein 2 (MeCP2) Antibody - References

Amir RE, Van den Veyver IB, Wan M, Tran CQ, Francke U, Zoghbi HY (1999) Rett syndrome is caused by mutations in X-linked MECP2, encoding methyl-CpG-binding protein 2. *Nat Genet.* Oct;23(2):185-8.

Hutchinson AN, Deng JV, Cohen S, West AE (2012) Phosphorylation of MeCP2 at Ser421 contributes to chronic antidepressant action. *Journal of Neuroscience.* Oct 10;32(41):14355-63.

Nan X, Ng HH, Johnson CA, Laherty CD, Turner BM, Eisenman RN, Bird A (1998) Transcriptional repression by the methyl-CpG-binding protein MeCP2 involves a histone deacetylase complex. Nature. May 28;393(6683):386-9.