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Anti-MeCP2 (C-terminus) Antibody

Catalog # AN1836

Product Information

Application	WB, ICC
Primary Accession	Q9Z2D6
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	52307

Additional Information

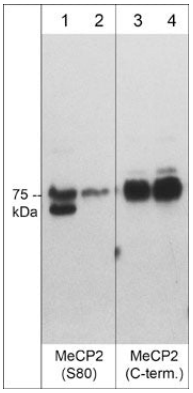
Gene ID	17257
Other Names	Methyl-CpG-Binding2
Target/Specificity	Methyl-CpG Binding Protein 2 (MeCP2) was identified based on its affinity for methylated cytosines within DNA. As a chromatin-associated multifunctional protein, MeCP2 has been implicated in regulation of transcription and chromatin structure. Mutations of MeCP2 cause Rett syndrome, which results from neuronal dysfunction and impairment in cognitive and motor functions. Regulation of MeCP2 activity may involve phosphorylation at multiple sites. Ser-421 in MeCP2 is phosphorylated in response to neuronal activity, calcium influx, and is dependent on Cam-KII. Alanine mutation of Ser-421 leads to defects in synapse development and activity. Ser-80 in MeCP2 is phosphorylated in HeLa nuclear extracts and neurons. Alanine mutation of Ser-80 attenuates MeCP2 chromatin association and leads to locomotor deficits in transgenic knock-in mice. Thus, phosphorylation of MeCP2 may be important for altering its function during neuronal activity.
Dilution	WB~~1:1000 ICC~~N/A
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	Anti-MeCP2 (C-terminus) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

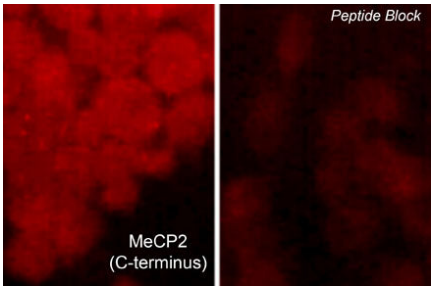
Methyl-CpG Binding Protein 2 (MeCP2) was identified based on its affinity for methylated cytosines within DNA. As a chromatin-associated multifunctional protein, MeCP2 has been implicated in regulation of transcription and chromatin structure. Mutations of MeCP2 cause Rett syndrome, which results from neuronal dysfunction and impairment in cognitive and motor functions. Regulation of MeCP2 activity may involve phosphorylation at multiple sites. Ser-421 in MeCP2 is phosphorylated in response to neuronal

activity, calcium influx, and is dependent on Cam-KII. Alanine mutation of Ser-421 leads to defects in synapse development and activity. Ser-80 in MeCP2 is phosphorylated in HeLa nuclear extracts and neurons. Alanine mutation of Ser-80 attenuates MeCP2 chromatin association and leads to locomotor deficits in transgenic knock-in mice. Thus, phosphorylation of MeCP2 may be important for altering its function during neuronal activity.

Images



Western blot of adult mouse brain tissue lysate. The blot lanes were untreated (lanes 1 & 3) or treated with lambda phosphatase (lanes 2 & 4) then probed with rabbit polyclonals anti-MeCP2 (Ser-80) (lanes 1 & 2) or anti-MeCP2 (C-terminus) (lanes 3 & 4).



Immunocytochemical labeling of MeCP2 in rat PC12 cells differentiated with NGF. The cells were probed with MeCP2 (C-terminus) rabbit polyclonal antibody (AN1836) in the absence (left) or presence (right) of blocking peptide (MX4595). The antibody was detected using appropriate secondary antibody conjugated to DyLight® 594.