diagenode
A Hologic Company

TECHNICAL DATASHEET

MeCP2 polyclonal antibody

Other names: AUTSX3, MRX16, MRX79, MRXS13, MRXSL, PPMX, RTS, RTT

Cat. No. C15410052
Type: Polyclonal **ChIP grade**
Source: Rabbit
Lot #: A20-001P
Size: 50 µg/ 42 µl
Concentration: 1.2 µg/µl

Specificity: Human: positive. Other species: not tested.
Purity: Affinity purified polyclonal antibody in PBS containing 0.05% azide and 0.05% ProClin 300.
Storage: Store at -20°C; for long storage, store at -80°C. Avoid multiple freeze-thaw cycles
Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures

Description: Polyclonal antibody raised in rabbit against MeCP2 (Methyl-CpG-binding domain protein 2), using a KLH-conjugated synthetic peptide containing a sequence from the C-terminal part of the protein.

Applications

	Suggested dilution	Results
ChIP*	5 µg per IP	Fig 1
ELISA	1:1,000	Fig 2
Western blotting	1:1,000	Fig 3, 4

* Please note that the optimal antibody amount per IP should be determined by the end-user. We recommend testing 1-5 µg per IP.

Target description

MeCP2 (UniProt/Swiss-Prot entry P51608) is a chromosomal protein with abundant binding sites in the chromatin. It belongs to the family of methyl CpG binding proteins which also comprises MBD1, MBD2, MBD3 and MBD4. MeCP2 can bind specifically to methylated promoters, thereby repressing transcription. This transcriptional repression is mediated through interaction with histone deacetylase and the corepressor SIN3A. MeCP2 also is essential for development. Mutations in MeCP2 are the cause of several types of mental retardation including Rett syndrome, a progressive neurological disorder that causes mental retardation in females and mental retardation syndromic X-linked type 13, and may also be involved in Angelman syndrome and susceptibility to some types of autism.

Results

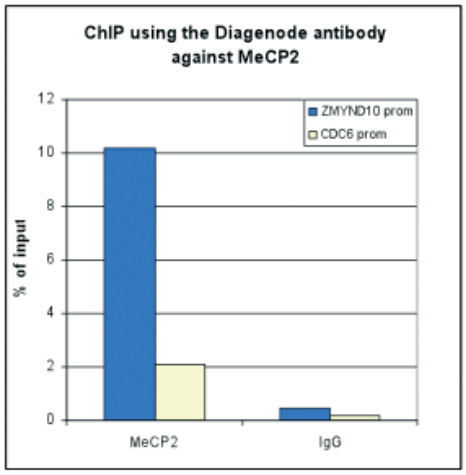

Figure 1. ChIP results obtained with the Diagenode antibody directed against MeCP2

ChIP assays were performed using human osteosarcoma (U2OS) cells, the Diagenode antibody against MeCP2 (Cat. No. C15410052) and optimized PCR primer sets. Sheared chromatin from 1x10e6 cells and 5 µg of antibody were used per ChIP experiment. IgG (1 µg/IP) was used as a negative IP control. Quantitative PCR was performed with primers for the promoters of the ZMYND10 gene (used as a positive control) and CDC6 gene (used as a negative control). Figure 1 shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

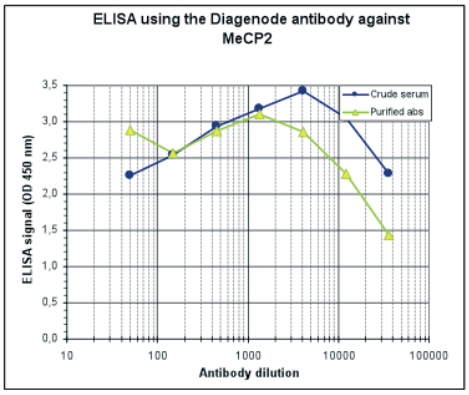

Figure 2. Determination of the antibody titer

To determine the titer of the antibody, an ELISA was performed using a serial dilution of the Diagenode antibody directed against MeCP2 (Cat. No. C15410052) and the crude serum. The plates were coated with the peptide used for immunization of the rabbit. By plotting the absorbance against the antibody dilution (Figure 2), the titer of the purified antibody was estimated to be: 1:32,900.

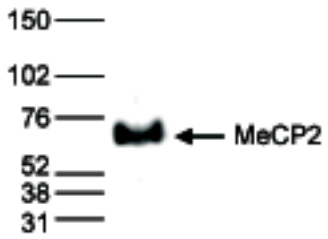

Figure 3. Western blot analysis using the Diagenode antibody directed against MeCP2

Nuclear extracts (40 µg) from HeLa cells were analysed by Western blot using the Diagenode antibody against MeCP2 (Cat. No. C15410052) diluted 1:1,000 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.

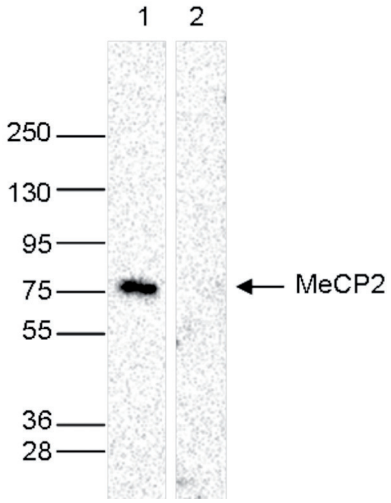

Figure 4. Western blot analysis using the Diagenode antibody directed against MeCP2

Whole cell extracts (40 µg) from HeLa cells transfected with MeCP2 siRNA (lane 2) and from an untransfected control (lane 1) were analysed by Western blot using the Diagenode antibody against MeCP2 (Cat. No. C15410052) diluted 1:1,000 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.

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