

Rabbit MBD1 Polyclonal Antibody | anti-MBD1 antibody

Anti-MBD1 Antibody

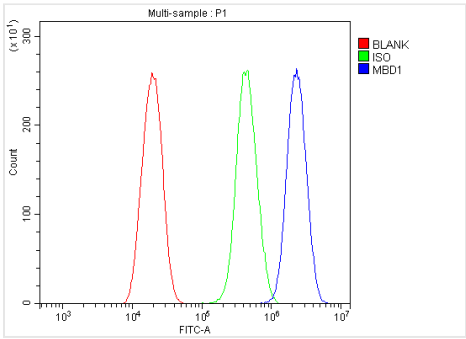
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA125649	Rabbit	Human, Mouse, Rat	Flow Cytometry, Functional Assay, Western Blot

PRODUCT SYNONYMS

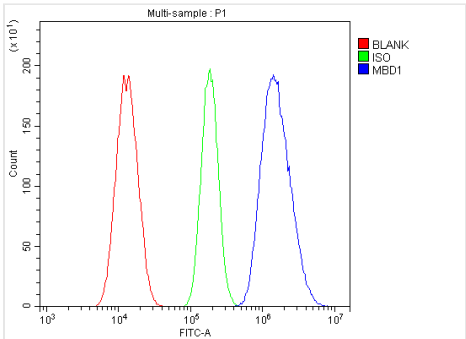
MBD1; Polyclonal Antibody; Anti-MBD1 Antibody; CXXC3; PCM1; Methyl-CpG-binding domain protein 1; CXXC-type zinc finger protein 3; Methyl-CpG-binding protein MBD1; Protein containing methyl-CpG-binding domain 1; methyl-CpG binding domain protein 1; anti-MBD1 antibody

PRODUCT SPECIFICATIONS

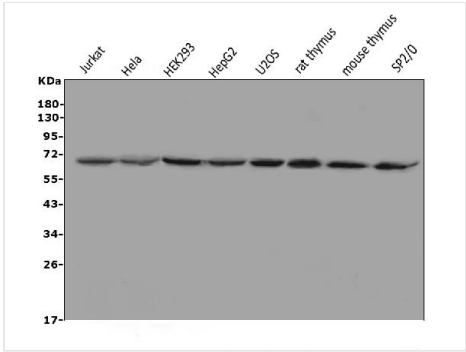
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for MBD1 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.01mg NaN ₃ .
Applicable Applications for anti-MBD1 antibody	FCM/FACS (Flow Cytometry), WB (Western Blot)
Immunogen	A synthetic peptide corresponding to a sequence of human MBD1 (DLTLDFKQGILCYPAPKAHPVAVASKRK).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



FCM/FACS (Flow Cytometry)
Figure 3. Flow Cytometry analysis of U2OS cells using anti-MBD1 antibody (AAA125649).Overlay histogram showing U2OS cells stained with AAA125649 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MBD1 Antibody (AAA125649, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



FCM/FACS (Flow Cytometry)
Figure 2. Flow Cytometry analysis of A549 cells using anti-MBD1 antibody (AAA125649).Overlay histogram showing A549 cells stained with AAA125649 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MBD1 Antibody (AAA125649, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



WB (Western Blot)
Figure 1. Western blot analysis of MBD1 using anti-MBD1 antibody (AAA125649).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: human Jurkat whole cell lysatesLane 2: human HELA whole cell lysatesLane 3: human HEK293 whole cell lysatesLane 4: human HEPG2 whole cell lysatesLane 5: human U2OS whole cell lysatesLane 6: rat thymus tissue lysates,Lane 7: mouse thymus tissue lysates,Lane 8: mouse SP2/0 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-MBD1 antigen affinity purified polyclonal antibody (Catalog # AAA125649) at 0. 5 μg/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for MBD1 at approximately 67KD. The expected band size for MBD1 is at 67KD.

ADDITIONAL INFORMATION

Related Product Information for anti-MBD1 antibody

MBD1(Methyl-CpG-Binding Domain Protein 1), also known as PCM1 or CXXC3, is a protein that in humans is encoded by the MBD1 gene. Using PCR on a hybrid panel and FISH, Hendrich et al. (1999) mapped the MBD1 gene to chromosome 18q21, 2. 1 cM distal to MBD2. Using yeast 2-hybrid analysis, reciprocal immunoprecipitation analysis, and protein pull-down assays, Fujita et al. (2003) showed that MBD1 interacted directly with MCAF. Deletion analysis revealed that the C-terminal transcriptional repressor domain(TRD) of MBD1 interacted with a conserved C-terminal domain of MCAF. Reporter gene assays showed that MCAF increased the repressive function of the isolated TRD of MBD1 against SP1. Chromatin immunoprecipitation analysis revealed that MBD1 linked MCAF to methylated promoters. Uchimura et al. (2006) found that MBD1 was multiply sumoylated in HeLa cells. Sumoylation did not alter the intracellular localization of MBD1 at nuclear foci in C-33A human cervical cancer cells.

References	1. Fujita, N., Watanabe, S., Ichimura, T., Ohkuma, Y., Chiba, T., Saya, H., Nakao, M. MCAF mediates MBD1-dependent transcriptional repression. <i>Molec. Cell. Biol.</i> 23: 2834-2843, 2003. 2. Hendrich, B., Abbott, C., McQueen, H., Chambers, D., Cross, S., Bird, A. Genomic structure and chromosomal mapping of the murine and human Mbd1, Mbd2, Mbd3, and Mbd4 genes. <i>Mammalian Genome</i> 10: 906-912, 1999. 3. Uchimura, Y., Ichimura, T., Uwada, J., Tachibana, T., Sugahara, S., Nakao, M., Saitoh, H. Involvement of SUMO modification in MBD1- and MCAF1-mediated heterochromatin formation. <i>J. Biol. Chem.</i> 281: 23180-23190, 2006.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	323462147
NCBI GeneID	4152
NCBI Accession #	NP_001191065.1
NCBI GenBank Nucleotide #	NM_001204136.1
UniProt Accession #	Q9UIS9; O15248; O95241; Q7Z7B5; Q8N4W4; Q9UNZ6; Q9UNZ7; Q9UNZ8; Q9UNZ9; A4UTZ0; B4DXJ5; E9PEC5
Molecular Weight	605
NCBI Official Full Name	methyl-CpG-binding domain protein 1 isoform 6
NCBI Official Synonym Full Names	methyl-CpG binding domain protein 1
NCBI Official Symbol	MBD1
NCBI Official Synonym Symbols	RFT; PCM1; CXXC3
NCBI Protein Information	methyl-CpG-binding domain protein 1; CXXC-type zinc finger protein 3; protein containing methyl-CpG-binding domain 1; methyl-CpG binding domain protein 1 isoform PCM1; the regulator of fibroblast growth factor 2 (FGF-2) transcription
UniProt Protein Name	Methyl-CpG-binding domain protein 1
UniProt Gene Name	MBD1
UniProt Synonym Gene Names	CXXC3; PCM1
UniProt Entry Name	MBD1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.