bsm-63074R **[Primary Antibody]**

MBD1 Recombinant Rabbit mAb

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DATASHEET

Host: Rabbit
Isotype: IgG
Clonality: Recombinant
CloneNo.: 18A16
GeneID: 4152
SWISS: Q9UIS9
Target: MBD1
Immunogen: A synthesized peptide derived from human MBD1: 550-605/605.
Purification: affinity purified by Protein A
Concentration: 1mg/ml
Storage: 10mM phosphate buffered saline , pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: DNA methylation, or the addition of methyl groups to cytosine bases in the dinucleotide CpG, is imperative to proper development and regulates gene expression. The methylation pattern involves the enzymatic processes of methylation and demethylation. The demethylation enzyme was recently found to be a mammalian protein, which exhibits demethylase activity associated to a methyl-CpG-binding domain (MBD). The enzyme is able to revert methylated cytosine bases to cytosines within the particular dinucleotide sequence mdCpdG by catalyzing the cleaving of the methyl group as methanol. MeCP2 and MBD1 (PCM1) are first found to repress transcription by binding specifically to methylated DNA. MBD2 and MBD4 (also known as MED1) were later found to colocalize with foci of heavily methylated satellite DNA and believed to mediate the biological functions of the methylation signal. Surprisingly, MBD3 does not bind methylated DNA both in vivo and in vitro. MBD1, MBD2, MBD3, and MBD4 are found to be expressed in somatic tissues, but the expression of MBD1 and MBD2 is reduced or absent in embryonic stem cells, which are known to be deficient in MeCP1 activity. MBD4 have homology to bacterial base excision repair DNA N-glycosylases/lyases. In some microsatellite unstable tumors MBD4 is mutated at an exonic polynucleotide tract.

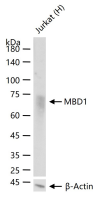
Applications: **WB** (1:500-1:2000)
IHC-P (1:50-1:200)
IHC-F (1:50-1:200)
IF (1:50-1:200)

Reactivity: Human

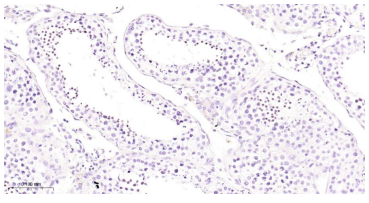
Predicted MW.: 67 kDa

Subcellular Location: Nucleus

VALIDATION IMAGES



25 ug total protein per lane of various lysates (see on figure) probed with MBD1 monoclonal antibody, unconjugated (bsm-63074R) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



Paraformaldehyde-fixed, paraffin embedded Human Testicles; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with MBD1 Monoclonal Antibody, Unconjugated(bsm-63074R) at 1:200 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.