10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MBD1 Antibody (monoclonal) (M02)

Mouse monoclonal antibody raised against a partial recombinant MBD1.
Catalog # AT2811a

Product Information

Application	WB, IHC, E
Primary Accession	Q9UIS9
Other Accession	NM_015846
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG2b Kappa
Clone Names	2C7
Calculated MW	66607

Additional Information

Gene ID	4152
Other Names	Methyl-CpG-binding domain protein 1, CXXC-type zinc finger protein 3, Methyl-CpG-binding protein MBD1, Protein containing methyl-CpG-binding domain 1, MBD1, CXXC3, PCM1
Target/Specificity	MBD1 (NP_056671, 415 a.a. ~ 508 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 IHC~~1:100~500 E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	MBD1 Antibody (monoclonal) (M02) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

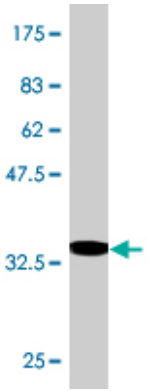
DNA methylation is the major modification of eukaryotic genomes and plays an essential role in mammalian development. Human proteins MECP2, MBD1, MBD2, MBD3, and MBD4 comprise a family of nuclear proteins related by the presence in each of a methyl-CpG binding domain (MBD). Each of these proteins, with the exception of MBD3, is capable of binding specifically to methylated DNA. MECP2, MBD1 and MBD2 can also repress transcription from methylated gene promoters. Five transcript variants of the MBD1 are generated by alternative splicing resulting in protein isoforms that contain one MBD domain, two to three cysteine-rich (CXXC) domains, and some differences in the COOH terminus. All five transcript variants repress transcription from methylated promoters; in addition, variants with three CXXC domains also repress unmethylated promoter activity. MBD1 and MBD2 map very close to each other on chromosome

18q21.

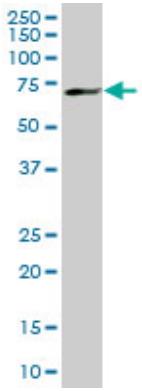
References

Common variants at 2q37.3, 8q24.21, 15q21.3 and 16q24.1 influence chronic lymphocytic leukemia risk. Crowther-Swanepoel D, et al. Nat Genet, 2010 Feb. PMID 20062064.Human BAHD1 promotes heterochromatic gene silencing. Bierne H, et al. Proc Natl Acad Sci U S A, 2009 Aug 18. PMID 19666599.Methyl-CpG binding domain 1 gene polymorphisms and lung cancer risk in a Chinese population. Liu H, et al. Biomarkers, 2008 Sep. PMID 18668384.Silencing of MBD1 and MeCP2 in prostate-cancer-derived PC3 cells produces differential gene expression profiles and cellular phenotypes. Yaqinuddin A, et al. Biosci Rep, 2008 Dec. PMID 18666890.Proteomic analysis of differential proteins in pancreatic carcinomas: Effects of MBD1 knock-down by stable RNA interference. Liu C, et al. BMC Cancer, 2008 Apr 29. PMID 18445260.

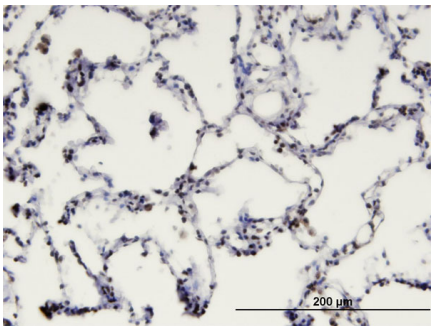
Images



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (36.08 KDa) .

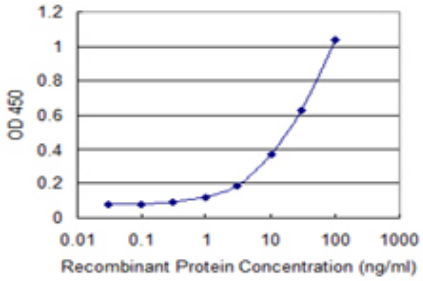


MBD1 monoclonal antibody (M02), clone 2C7. Western Blot analysis of MBD1 expression in IMR-32 ((Cat # AT2811a)



Immunoperoxidase of monoclonal antibody to MBD1 on formalin-fixed paraffin-embedded human lung. [antibody concentration 3 ug/ml]

Detection limit for recombinant GST tagged MBD1 is 0.3 ng/ml as a capture antibody.



Citations

- Specific binding of the methyl binding domain protein 2 at the BRCA1-NBR2 locus.