

# **Product datasheet**

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ARG41998 anti-MBD1 antibody

Package: 100 μl Store at: -20°C

## **Summary**

Product Description Rabbit Polyclonal antibody recognizes MBD1

Tested Reactivity Hu

Tested Application ICC/IF, IHC-P, IP, WB

Host Rabbit

**Clonality** Polyclonal

Isotype IgG

Target Name MBD1

Species Human

Immunogen Synthetic peptide of Human MBD1.

Conjugation Un-conjugated

Alternate Names RFT; PCM1; CXXC-type zinc finger protein 3; CXXC3; Methyl-CpG-binding domain protein 1; Methyl-CpG-

binding protein MBD1; Protein containing methyl-CpG-binding domain 1

## **Application Instructions**

Application table	Application	Dilution
	ICC/IF	1:50 - 1:200
	IHC-P	1:50 - 1:200
	IP	1:20
	WB	1:500 - 1:1000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	HeLa	
Observed Size	~ 77 kDa	

## **Properties**

Form	Liquid	
Purification	Affinity purified.	
Buffer	PBS (pH 7.4), 150 mM NaCl, 0.02% Sodium azide and 50% Glycerol.	
Preservative	0.02% Sodium azide	
Stabilizer	50% Glycerol	
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw	

Note

For laboratory research only, not for drug, diagnostic or other use.

#### Bioinformation

Gene Symbol

MBD1

Gene Full Name

methyl-CpG binding domain protein 1

Background

The protein encoded by this gene is a member of a family of nuclear proteins related by the presence of a methyl-CpG binding domain (MBD). These proteins are capable of binding specifically to methylated DNA, and some members can also repress transcription from methylated gene promoters. This protein contains multiple domains: MBD at the N-terminus that functions both in binding to methylated DNA and in protein interactions; several CXXC-type zinc finger domains that mediate binding to non-methylated CpG dinucleotides; transcriptional repression domain (TRD) at the C-terminus that is involved in transcription repression and in protein interactions. Numerous alternatively spliced transcript variants encoding different isoforms have been noted for this gene.[provided by RefSeq, Feb 2011]

**Function** 

Transcriptional repressor that binds CpG islands in promoters where the DNA is methylated at position 5 of cytosine within CpG dinucleotides. Binding is abolished by the presence of 7-mG that is produced by DNA damage by methylmethanesulfonate (MMS). Acts as transcriptional repressor and plays a role in gene silencing by recruiting AFT7IP, which in turn recruits factors such as the histone methyltransferase SETDB1. Probably forms a complex with SETDB1 and ATF7IP that represses transcription and couples DNA methylation and histone 'Lys-9' trimethylation. Isoform 1 and isoform 2 can also repress transcription from unmethylated promoters. [UniProt]

Calculated Mw

67 kDa

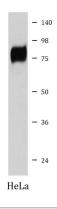
PTM

Sumoylated with SUMO1 by PIAS1 and PIAS3. Sumoylation affects transcriptional silencing by preventing the interaction with SETDB1. In contrast, sumoylation may increase interaction with AFT7IP. [UniProt]

Cellular Localization

Nucleus. Nucleus matrix. Nucleus speckle. Chromosome. Note=Colocalizes with the Ten-1 ICD form of TENM1 in foci associated with the nuclear matrix (By similarity). Nuclear, in a punctate pattern. Associated with euchromatic regions of the chromosomes, with pericentromeric regions on chromosome 1 and with telomeric regions from several chromosomes. [UniProt]

### **Images**



#### ARG41998 anti-MBD1 antibody WB image

Western blot: HeLa cell lysate stained with ARG41998 anti-MBD1 antibody.