

## Product datasheet for **AP20404PU-N**

### MBD3 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	<b>Western blot:</b> 1/500-1/1000.
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Specificity:	This antibody detects endogenous levels of MBD3 protein. (region surrounding His250)
Formulation:	Phosphate buffered saline (PBS), pH 7.2. State: Aff - Purified State: Liquid purified Ig fraction > 95% (by SDS-PAGE) Preservative: 0.05% sodium azide
Concentration:	1.0 mg/ml
Purification:	Affinity-chromatography using epitope-specific immunogen
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 33 kDa
Gene Name:	methyl-CpG binding domain protein 3
Database Link:	<a href="#">Entrez Gene 17192 Mouse</a> <a href="#">Entrez Gene 53615 Human</a> <a href="#">O95983</a>



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**Background:**

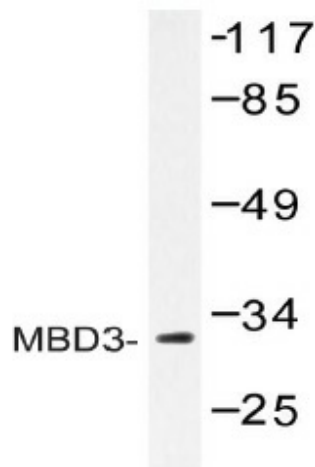
DNA methylation, or the addition of methyl groups to cytosine bases in the dinucleotide CpG, is imperative to proper development and regulates gene expression. The methylation pattern involves the enzymatic processes of methylation and demethylation. The demethylation enzyme was recently found to be a mammalian protein, which exhibits demethylase activity associated to a methyl-CpG-binding domain (MBD) (Bhattacharya et al.). 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 (Hendrich et al.). 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 has homology to bacterial base excision repair DNA N-glycosylases/lyases (Petronzelli et al.). In some microsatellite unstable tumors MBD4 is mutated at an exonic polynucleotide tract (Bader et al.).

**Synonyms:**

Methyl-CpG-binding domain protein 3

**Protein Families:**

Druggable Genome, Transcription Factors

**Product images:**

Western blot (WB) analysis of MBD3 antibody (Cat.-No.: AP20404PU-N) in extracts from Jurkat cells.