

PRODUCT DATA SHEET

Bioworld Technology CO., Ltd.



MBD3 (H250) Peptide

Cat No.: BS2250P

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 mCpG 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.).

Swiss-Prot

O95983

Applications

Blocking

Specificity

This peptide can be used with studies using BS2250 MBD3 (H250) pAb.

Purification & Purity

Synthetic peptide MBD3 (H250). (Note: the amino acid sequence is proprietary). The purity is > 98%.

Product

1 mg/ml in DI water.

Storage & Stability

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Research Use

For research use only, not for use in diagnostic procedure.

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