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ProductInformation

Anti-MBDin/XAB1 (KP-19)
Developed in Rabbit
IgG Fraction of Antiserum

Product Number **M 1944**

Product Description

Anti-MBDin/XAB (KP-19) is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 32-50 of human XAB1, conjugated to KLH via a C- terminal added cysteine residue. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of anti-serum that is essentially free of other rabbit serum proteins.

Anti MBDin/XAB1 (KP-19) recognizes human MBDin/XAB1. Applications include immunoblotting (41 kDa). Staining of the MBDin/XAB1 band in immunoblotting is specifically inhibited by the immunizing peptide.

Chromatin, the physiological packaging structure of histone proteins and DNA, is a key element in the regulation of gene expression. Histones are subjected to post-translational modifications, such as acetylation, phosphorylation and methylation, that play a major role in the regulation of transcription.[1, 2] DNA methylation is the major modification of eukaryotic genomes, which occurs at the fifth position of cytosine in CpG dinucleo-tide sequences, and is associated with transcriptional repression.[3-6] Silencing of transcription units has been found to occur in genes located on the inactive X-chromosome, genes silenced by genomic imprinting, and genes silenced in transformed cell lines and tumors.[3, 7-9]

To date, the DNA methylation system is composed of methyl-CpG-binding proteins, as well as of DNA cytosine methyl transferases.[3,10] Five methyl-CpG binding proteins were isolated: MeCP2, MBD1, MBD2, MBD3 and MBD4.[10, 11] MBD2 consists of two isoforms, MBD2a and MBD2b, which are generated from a single gene. MBD2a is a component of MeCP1, a large corepressor complex that represses transcription from densely methylated genes. Components of MeCP1 include MBD2, Mi-2, MTA2, MBD3 and HDAC1/2.[12] MIZF and MBDin were isolated as proteins interacting with MBD2.[13, 14] MBDin, in turn, is identical to XPA binding protein 1 (XAB1).[15] At the N-terminus, the protein contains the consensus sequence for a GTP-binding site. At the C-terminus, the protein is charac-terized by an acidic domain containing a cluster of acidic amino acid residues.[14, 15] The transcriptional repression by MBD2 at methylated promoters is relieved by MBdin.[14]

Reagent

The antibody is supplied as a solution in 0.01 M phos-phate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

By immunoblotting, a working antibody dilution of 1:250-1:500 is recommended using nuclear extracts of HeLa cells.

Recommendation: For immunoblotting, dilute the antibody in PBS containing 1.0% non-fat dry milk and 0.05% Tween™ 20.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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