

CBX5 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2181a

Product Information

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|--------------------------|---|
| Application | WB, IHC, ICC, E |
| Primary Accession | P45973 |
| Reactivity | Human, Mouse |
| Host | Mouse |
| Clonality | Monoclonal |
| Clone Names | 1B10B2 |
| Isotype | IgG1 |
| Calculated MW | 22225 |
| Description | This gene encodes a highly conserved nonhistone protein, which is a member of the heterochromatin protein family. The protein is enriched in the heterochromatin and associated with centromeres. The protein has a single N-terminal chromodomain which can bind to histone proteins via methylated lysine residues, and a C-terminal chromo shadow-domain (CSD) which is responsible for the homodimerization and interaction with a number of chromatin-associated nonhistone proteins. The encoded product is involved in the formation of functional kinetochore through interaction with essential kinetochore proteins. The gene has a pseudogene located on chromosome 3. Multiple alternatively spliced variants, encoding the same protein, have been identified. |
| Immunogen | Purified recombinant fragment of human CBX5 (AA: 1-191) expressed in E. Coli. |
| Formulation | Purified antibody in PBS with 0.05% sodium azide |

Additional Information

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| Gene ID | 23468 |
| Other Names | Chromobox protein homolog 5, Antigen p25, Heterochromatin protein 1 homolog alpha, HP1 alpha, CBX5, HP1A |
| Dilution | WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 ICC~~N/A E~~1/10000 |
| Storage | Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| Precautions | CBX5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

Protein Information

Name CBX5

Synonyms HP1A

Function Component of heterochromatin that recognizes and binds histone H3 tails methylated at 'Lys-9' (H3K9me), leading to epigenetic repression (PubMed:[40440427](#)). In contrast, it is excluded from chromatin when 'Tyr-41' of histone H3 is phosphorylated (H3Y41ph) (PubMed:[19783980](#)). Also recognizes and binds histone H1.4 methylated at 'Lys-26' (H1.4K26me) (PubMed:[16127177](#)). Excluded from chromatin when histone H1.4 is Simultaneously methylated at Lys-26 (H1.4K26me) and phosphorylated at Ser-27 (H1.4S27Ph) (PubMed:[16127177](#)). May contribute to the association of heterochromatin with the inner nuclear membrane by interactions with the lamin-B receptor (LBR) (PubMed:[19783980](#)). Involved in the formation of kinetochore through interaction with the MIS12 complex subunit NSL1 (PubMed:[19783980](#), PubMed:[20231385](#)). Required for the formation of the inner centromere (PubMed:[20231385](#)).

Cellular Location Nucleus. Chromosome. Chromosome, centromere. Note=Colocalizes with HNRNPU in the nucleus (PubMed:19617346). Component of centromeric and pericentromeric heterochromatin. Associates with chromosomes during mitosis (PubMed:40440427). Associates specifically with chromatin during metaphase and anaphase (PubMed:19617346). Localizes to sites of DNA damage (PubMed:28977666).

References

1. Mol Carcinog. 2011 Aug;50(8):601-13.2. J Mol Biol. 2013 Jan 9;425(1):54-70.

Images

