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HP1 alpha Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP53281

Product Information

Application	WB, ICC, IHC
Primary Accession	P45973
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	22225

Additional Information

Gene ID	23468
Other Names	Antigen p25;Cbx 5;Cbx5;CBX5_HUMAN;CG8409;Chromobox homolog 5 (Drosophila HP1 alpha); Chromobox homolog 5 (HP1 alpha homolog Drosophila); Chromobox homolog 5 (HP1 alpha homolog, Drosophila); Chromobox homolog 5; Chromobox protein homolog 5; Chromobox protein homologue 5; Heterochromatin protein 1 alpha; Heterochromatin protein 1; Heterochromatin protein 1 homolog alpha; HP 1; HP 1A; HP1 alpha; HP1 alpha homolog; HP1; HP1A; HP1Hs alpha; Su(var)205.
Dilution	WB~~1:1000 ICC~~1:300 IHC~~1:100
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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).

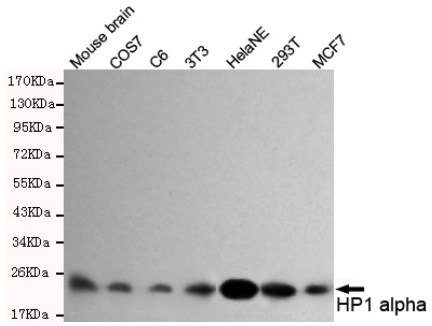
Background

Component of heterochromatin that recognizes and binds histone H3 tails methylated at 'Lys-9' (H3K9me), leading to epigenetic repression. In contrast, it is excluded from chromatin when 'Tyr-41' of histone H3 is phosphorylated (H3Y41ph). Can interact with lamin-B receptor (LBR). This interaction can contribute to the association of the heterochromatin with the inner nuclear membrane. Involved in the formation of functional kinetochore through interaction with MIS12 complex proteins.

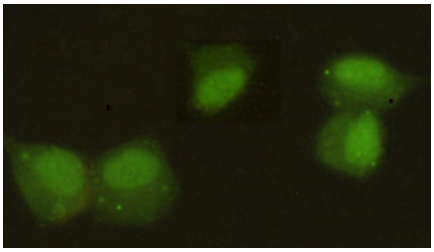
References

Saunders W.S.,et al.J. Cell Sci. 104:573-582(1993).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Ye Q.,et al.J. Biol. Chem. 271:14653-14656(1996).
Lubec G.,et al.Submitted (DEC-2008) to UniProtKB.

Images

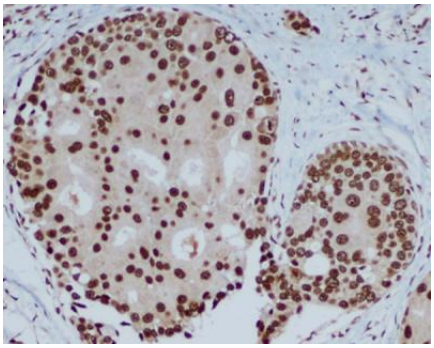


Western blot detection of HP1 alpha in MCF7,293T,HelaNE,3T3,C6,COS7 and Mouse brain lysates and using HP1 alpha mouse mAb (1:1000 diluted).Predicted band size: 22KDa.Observed band size: 22KDa



Immunocytochemistry stain of Hela using HP1 alpha mouse mAb (1:300).

Immunohistochemical analysis of paraffin-embedded human breast carcinoma with HP1 alpha mouse mAb (3G2-H10-A6, 1:400 diluted),showing nuclear localization.A high pressure mediated antigen retrieval step was performed in citrat buffer(pH6.0).



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