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HP1-gamma Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP53280

Product Information

Application	WB, ICC, IP, IHC
Primary Accession	Q13185
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	20811

Additional Information

Gene ID	11335
Other Names	CBX 3;CBX3 ;CBX3_HUMAN;Chromobox homolog 3 (HP1 gamma homolog, Drosophila);Chromobox homolog 3;Chromobox protein homolog 3 ;GAMMA; HECH;Heterochromatin like protein 1; Heterochromatin protein 1 homolog gamma;Heterochromatin protein HP1 gamma;HP1 gamma;HP1 gamma homolog;HP1Hs gamma;Modifier 2 protein.
Dilution	WB~~1:1000 ICC~~1:200 IP~~1:500 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	CBX3
Function	Component of heterochromatin, which recognizes and binds histone H3 tails methylated at 'Lys-9', leading to epigenetic repression (PubMed:11242053). 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). Involved in the formation of functional kinetochore through interaction with MIS12 complex proteins (PubMed:15502821). Contributes to the conversion of local chromatin to a heterochromatin-like repressive state through H3 'Lys-9' trimethylation, mediates the recruitment of the methyltransferases SUV39H1 and/or SUV39H2 by the PER complex to the E-box elements of the circadian target genes such as PER2 itself or PER1 (By similarity). Mediates the recruitment of

NIPBL to sites of DNA damage at double-strand breaks (DSBs) (PubMed:28167679).

Cellular Location

Nucleus. Note=Associates with euchromatin and is largely excluded from constitutive heterochromatin. May be associated with microtubules and mitotic poles during mitosis (Potential).

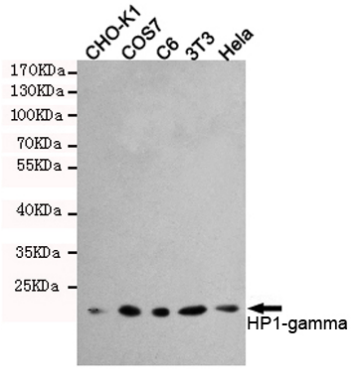
Background

Seems to be involved in transcriptional silencing in heterochromatin-like complexes. Recognizes and binds histone H3 tails methylated at 'Lys-9', leading to epigenetic repression. May contribute to the association of the heterochromatin with the inner nuclear membrane through its interaction with lamin B receptor (LBR). Involved in the formation of functional kinetochore through interaction with MIS12 complex proteins. Contributes to the conversion of local chromatin to a heterochromatin-like repressive state through H3 'Lys-9' trimethylation, mediates the recruitment of the mehtyltransferases SUV39H1 and/or SUV39H2 by the PER complex to the E-box elements of the circadian target genes such as PER2 itself or PER1.

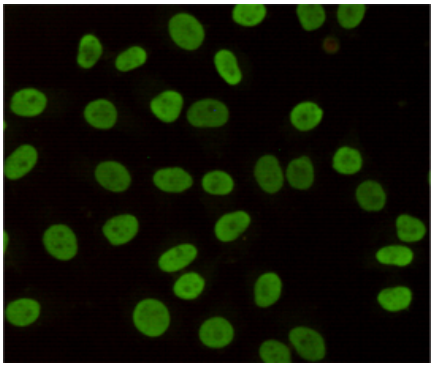
References

Ye Q.,et al.J. Biol. Chem. 271:14653-14656(1996).
Ye Q.,et al.Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
Koike N.,et al.FEBS Lett. 467:17-21(2000).
Chen J.H.,et al.Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.
Lubec G.,et al.Submitted (MAR-2007) to UniProtKB.

Images

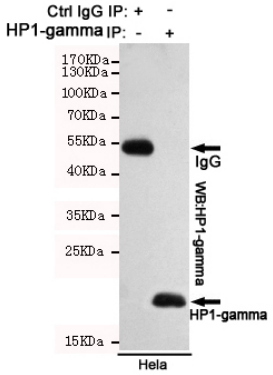


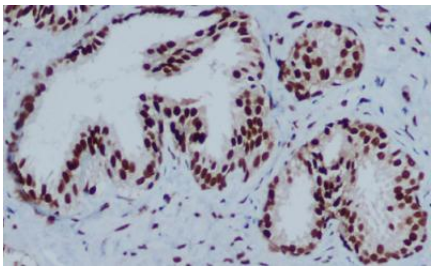
Western blot detection of HP1-gamma in Hela,3T3,C6,COS7 and CHO-K1 cell lysates using HP1-gamma mouse mAb (1:1000 diluted).Predicted band size:22KDa.Observed band size:22KDa.



Immunocytochemistry staining of HeLa cells fixed with 4% Paraformaldehyde and using anti-HP1-gamma mouse mAb (dilution 1:200).

Immunoprecipitation analysis of Hela cell lysates using HP1-gamma mouse mAb.





Immunohistochemical analysis of paraffin-embedded Prostate Cancer using HP1-gamma mouse mAb (1/200 dilution).Antigen retrieval was performed by pressure cooking in citrate buffer (pH 6.0).

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