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Goat Anti-CBX5 / HP1-Alpha Antibody
Peptide-affinity purified goat antibody
Catalog # AF1205a

Specification

Goat Anti-CBX5 / HP1-Alpha Antibody - Product Information

Application	**IHC, WB, IF, FC**
Primary Accession	P45973
Other Accession	NP_001120794, 23468
Reactivity	**Human**
Predicted	**Mouse, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**22225**

Goat Anti-CBX5 / HP1-Alpha Antibody - Additional Information

Gene ID 23468

Other Names
Chromobox protein homolog 5, Antigen p25, Heterochromatin protein 1 homolog alpha, HP1 alpha, CBX5, HP1A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

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
Goat Anti-CBX5 / HP1-Alpha Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-CBX5 / HP1-Alpha Antibody - 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. In contrast, it is excluded from chromatin when 'Tyr-41' of histone H3 is phosphorylated (H3Y41ph) (PubMed:<a

href="http://www.uniprot.org/citations/19783980" target="_blank">19783980). 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).

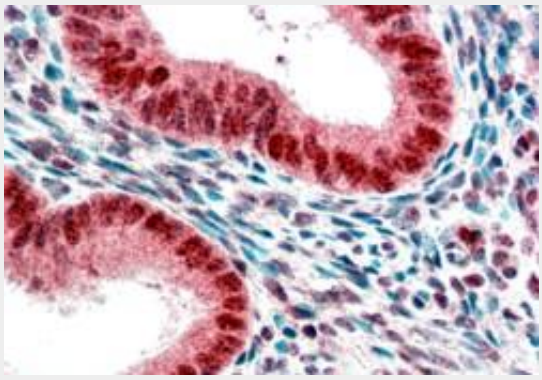
Cellular Location
Nucleus. Chromosome. Chromosome, centromere. Note=Colocalizes with HNRNPU in the nucleus (PubMed:19617346). Component of centromeric and pericentromeric heterochromatin. Associates with chromosomes during mitosis. Associates specifically with chromatin during metaphase and anaphase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

Goat Anti-CBX5 / HP1-Alpha Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-CBX5 / HP1-Alpha Antibody - Images



AF1205a (2.5 µg/ml) staining of paraffin embedded Human Uterus. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

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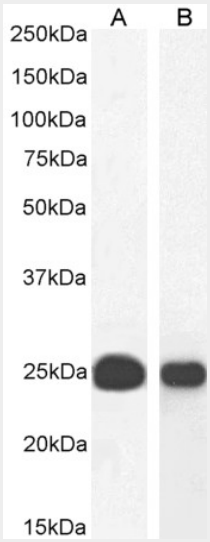
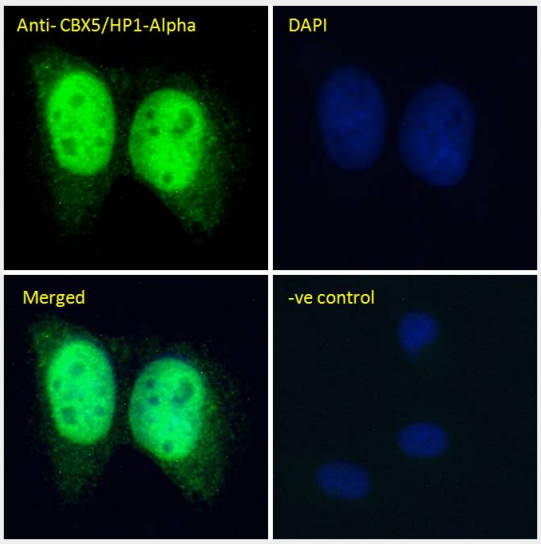
AF1205a (0.03 µg/ml) staining of Hela lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

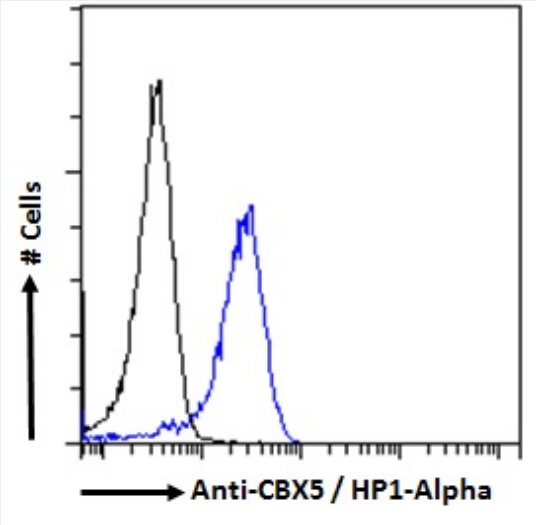


EB06957 (0.03µg/ml) staining of A43N (A) and K562 (B) cell lysate (35µg protein in RIPA buffer). Detected by chemiluminescence.



EB06957 Immunofluorescence analysis of paraformaldehyde fixed U2OS cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody

(4ug/ml), showing nuclear staining. The nuclear stain is DAPI (blue)



EB06957 Flow cytometric analysis of paraformaldehyde fixed HeLa cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml). IgG control: Unimmunized goat IgG (black line) fol

Goat Anti-CBX5 / HP1-Alpha Antibody - Background

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.

Goat Anti-CBX5 / HP1-Alpha Antibody - References

Human POGZ modulates dissociation of HP1alpha from mitotic chromosome arms through Aurora B activation. Nozawa RS, et al. Nat Cell Biol, 2010 Jul. PMID 20562864.
Lamin A rod domain mutants target heterochromatin protein 1alpha and beta for proteasomal degradation by activation of F-box protein, FBXW10. Chaturvedi P, et al. PLoS One, 2010 May 13. PMID 20498703.
Inner centromere formation requires hMis14, a trident kinetochore protein that specifically recruits HP1 to human chromosomes. Kiyomitsu T, et al. J Cell Biol, 2010 Mar 22. PMID 20231385.
Protein complex of Drosophila ATRX/XNP and HP1a is required for the formation of pericentric beta-heterochromatin in vivo. Emelyanov AV, et al. J Biol Chem, 2010 May 14. PMID 20154359.
ATRX interacts with H3.3 in maintaining telomere structural integrity in pluripotent embryonic stem cells. Wong LH, et al. Genome Res, 2010 Mar. PMID 20110566.