

**CBX5 Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV11141****Specification**

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**CBX5 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P45973</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	22225

**CBX5 Antibody - Additional Information****Gene ID** 23468

Positive Control	Western Blot: Various cell lysates
Application & Usage	Western blot: 1:500 - 1:2000, IHC: 1:50 - 1:200

**Other Names**  
CBX5, HP1, HP1A**Target/Specificity**  
CBX5**Antibody Form**  
Liquid**Appearance**  
Colorless liquid**Formulation**  
100 µg of antibody in 100 µl PBS containing 0.02% sodium azide, 50% glycerol, pH 7.3**Handling**  
The antibody solution should be gently mixed before use.**Reconstitution & Storage**  
-20 °C**Background Descriptions****Precautions**  
CBX5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.**CBX5 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). 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.

**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)

**CBX5 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 Cytometry](#)
- [Cell Culture](#)

**CBX5 Antibody - Images**

**CBX5 Antibody - Background**

Heterochromatin protein 1 (HP1) is a family of heterochromatic adaptor molecules involved in both gene silencing and higher order chromatin structure. All three HP1 family members ( $\alpha$ ,  $\beta$ , and  $\gamma$ ) are primarily associated with centromeric heterochromatin; However, HP1 $\beta$  and  $\gamma$  also localize to euchromatic sites in the genome. HP1 proteins are approximately 25 kDa in size and contain a conserved amino terminal chromodomain, followed by a variable hinge region and a conserved carboxyterminal chromoshadow domain. The chromodomain facilitates binding to histone H3 tri-methylated at Lys9, a histone "mark" closely associated with centromeric heterochromatin. The variable hinge region binds both RNA and DNA in a sequence independent manner. The chromoshadow domain mediates the dimerization of HP1 proteins, in addition to binding multiple proteins implicated in gene silencing and heterochromatin formation, including the SUV39H histone methyltransferase, the DNMT1 and DNMT3a DNA methyltransferases, and the p150 subunit of chromatin assembly factor1 (CAF1). In addition to contributing to heterochromatin formation and propagation, HP1 and SUV39H are also found complexed with retinoblastoma (Rb) and E2F6 proteins, both of which function to repress euchromatic gene transcription in quiescent cells. HP1 proteins are subject to multiple types of posttranslational modifications, including phosphorylation, acetylation, methylation, ubiquitination, and sumoylation, suggesting multiple means of regulation.