10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CBX3 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV11140

Specification

CBX3 Antibody - Product Information

Application	**WB**
Primary Accession	Q13185
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**20811**

CBX3 Antibody - Additional Information

Gene ID 11335

Positive Control	**Western Blot: Various cell lysates**
Application & Usage	**Western blot: 1:500 – 1:2000, IHC: 1:50 – 1:100, IF: 1:20 – 1:50**

Other Names
HECH, HP1GAMMA, HP1Hsgamma, HP1γ

Target/Specificity
CBX3

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
CBX3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CBX3 Antibody - Protein Information

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Name CBX3

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

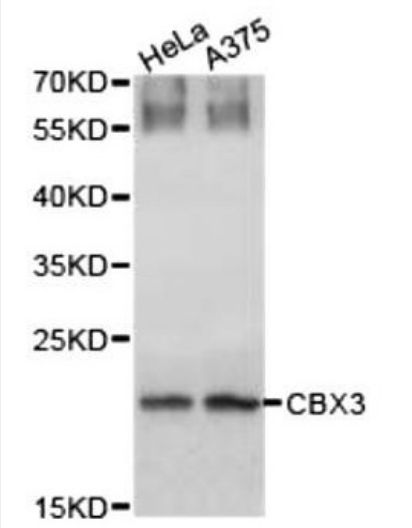
Cellular Location
Nucleus. Note=Associates with euchromatin and is largely excluded from constitutive heterochromatin. May be associated with microtubules and mitotic poles during mitosis (Potential).

CBX3 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

CBX3 Antibody - Images



WB of various cell extracts with CBX3 pAb.

CBX3 Antibody - Background

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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 (α, β, and γ) are primarily associated with centromeric heterochromatin; However, HP1β and γ 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 chromatinassembly 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.