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PC2 (CBX4) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2514a

Specification

PC2 (CBX4) Antibody (N-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	O00257
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**80-110**

PC2 (CBX4) Antibody (N-term) - Additional Information

Gene ID 8535

Other Names
E3 SUMO-protein ligase CBX4, 632-, Chromobox protein homolog 4, Polycomb 2 homolog, Pc2, hPc2, CBX4

Target/Specificity
This PC2 (CBX4) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 80-110 amino acids from the N-terminal region of human PC2 (CBX4).

Dilution
WB~~1:1000
IHC-P~~1:50~100
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PC2 (CBX4) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

PC2 (CBX4) Antibody (N-term) - Protein Information

Name CBX4

Function E3 SUMO-protein ligase that catalyzes sumoylation of target proteins by promoting the

transfer of SUMO from the E2 enzyme to the substrate (PubMed:12679040, PubMed:22825850). Involved in the sumoylation of HNRNPK, a p53/TP53 transcriptional coactivator, hence indirectly regulates p53/TP53 transcriptional activation resulting in p21/CDKN1A expression. Monosumoylates ZNF131 (PubMed:22825850).

Cellular Location
Nucleus. Nucleus speckle. Note=Localization to nuclear polycomb bodies is required for ZNF131 sumoylation (PubMed:22467880). Localized in distinct foci on chromatin (PubMed:18927235)

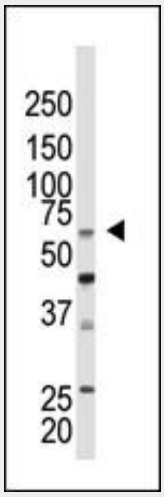
Tissue Location
Ubiquitous.

PC2 (CBX4) Antibody (N-term) - 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

PC2 (CBX4) Antibody (N-term) - Images



The anti-CBX4 N-term Pab (Cat. #AP2514a) is used in Western blot to detect CBX4 in mouse kidney tissue lysate.

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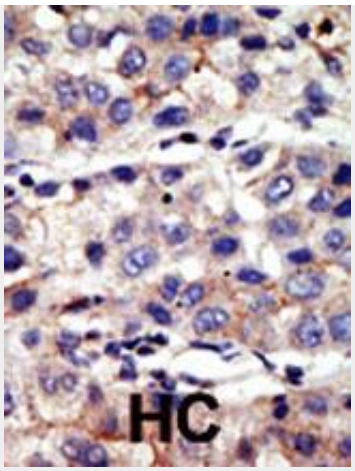

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

PC2 (CBX4) Antibody (N-term) - Background

CBX4 is a member of Drosophila Polycomb group gene family. The polycomb group (PcG) genes are essential for maintenance of proper expression patterns of developmental master regulators; changes in expression pf PcG proteins have been associated with cancer. CBX4 is a part of the cellular memory system responsible for the inheritance of gene activity by progeny cells. It participates in maintaining the transcriptionally repressive state of genes. CBX4 is part of acomplex that acts via chromatin remodeling and modification of histones; it mediates monoubiquitination of histone H2A 'Lys-119', rendering chromatin heritably changed in its expressibility. CBX4 is an E3 SUMO-protein ligase which facilitates SUMO1 conjugation by UBE2I.

PC2 (CBX4) Antibody (N-term) - References

Kagey, M.H., et al., Cell 113(1):127-137 (2003).
Satijn, D.P., et al., Mol. Cell. Biol. 17(10):6076-6086 (1997).

PC2 (CBX4) Antibody (N-term) - Citations

- HSP70-Hrd1 axis precludes the oncorepressor potential of N-terminal misfolded Blimp-1s in lymphoma cells.
- Human Polycomb protein 2 promotes Î±-synuclein aggregate formation through covalent SUMOylation.
- The SUMO E3 ligase activity of Pc2 is coordinated through a SUMO interaction motif.