

# PC2 (CBX4) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP2514a

## Product Information

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<b>Application</b>	WB, IHC-P, E
<b>Primary Accession</b>	<a href="#">O00257</a>
<b>Reactivity</b>	Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Calculated MW</b>	61368
<b>Antigen Region</b>	80-110

## Additional Information

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<b>Gene ID</b>	8535
<b>Other Names</b>	E3 SUMO-protein ligase CBX4, 632-, Chromobox protein homolog 4, Polycomb 2 homolog, Pc2, hPc2, CBX4
<b>Target/Specificity</b>	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).
<b>Dilution</b>	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
<b>Format</b>	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.
<b>Storage</b>	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.
<b>Precautions</b>	PC2 (CBX4) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	CBX4
<b>Function</b>	E3 SUMO-protein ligase that catalyzes sumoylation of target proteins by promoting the transfer of SUMO from the E2 enzyme to the substrate (PubMed: <a href="#">12679040</a> , PubMed: <a href="#">22825850</a> ). 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.

## Background

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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 of 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 a complex 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.

## References

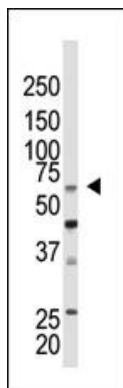
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Kagey, M.H., et al., Cell 113(1):127-137 (2003).

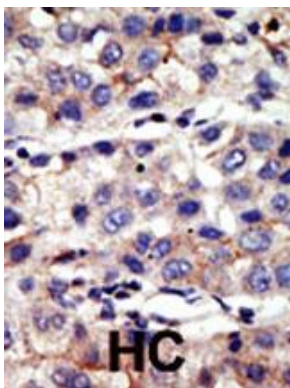
Satijn, D.P., et al., Mol. Cell. Biol. 17(10):6076-6086 (1997).

## Images

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



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.

## Citations

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- [HSP70-Hrd1 axis precludes the oncorepressor potential of N-terminal misfolded Blimp-1s in lymphoma cells.](#)
- [Human Polycomb protein 2 promotes  \$\alpha\$ -synuclein aggregate formation through covalent SUMOylation.](#)

- [The SUMO E3 ligase activity of Pc2 is coordinated through a SUMO interaction motif.](#)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.