

CBX4 Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	78	Rabbit	#O00257	8535

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at – 20°C. Do not aliquot the antibody.

Specificity/Sensitivity

CBX4 Antibody recognizes endogenous levels of total CBX4 protein. In Western blot analysis, the antibody detects 32kDa and 55kDa proteins of unknown identity.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro166 of human CBX4 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The polycomb group (PcG) proteins contribute to the maintenance of cell identity, stem cell self-renewal, cell cycle regulation, and oncogenesis by maintaining the silenced state of genes that promote cell lineage specification, cell death, and cell-cycle arrest (1-4). PcG proteins exist in two complexes that cooperate to maintain long-term gene silencing through epigenetic chromatin modifications. The first complex, EED-EZH2, is recruited to genes by DNA-binding transcription factors and methylates histone H3 on Lys27. This histone methyl-transferase activity requires the Ezh2, Eed, and Suz12 subunits of the complex (5). Histone H3 methylation at Lys27 facilitates the recruitment of the second complex, PRC1, which ubiquitinylates histone H2A on Lys119 (6). CBX4 is a component of the PRC1 complex, which together with Ring1 strongly enhances the E3 ubiquitin ligase activity of the Ring2 catalytic subunit (7,8). CBX4 itself is a SUMO E3 ligase, and its function influences EMT, DNA damage response, tumor angiogenesis, and self-renewal (9-13).

Background References

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5. Cao, R. and Zhang, Y. (2004) *Mol Cell* 15, 57-67.
6. Wang, H. et al. (2004) *Nature* 431, 873-8.
7. Satijn, D.P. et al. (1997) *Mol Cell Biol* 17, 6076-86.
8. Cao, R. et al. (2005) *Mol Cell* 20, 845-54.
9. Kagey, M.H. et al. (2003) *Cell* 113, 127-37.
10. Li, B. et al. (2007) *Biochem J* 405, 369-78.
11. Ismail, I.H. et al. (2012) *Nucleic Acids Res* 40, 5497-510.
12. Li, J. et al. (2014) *Cancer Cell* 25, 118-31.
13. Klauke, K. et al. (2013) *Nat Cell Biol* 15, 353-62.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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