

CBX4 (E6L7X) Rabbit mAb

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

Applications: W, IP, IF-IC, ChIP, ChIP-seq, C&R	Reactivity: H M Mk	Sensitivity: Endogenous	MW (kDa): 78	Source/Isotype: Rabbit IgG	UniProt ID: #O00257	Entrez-Gene Id: 8535
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Product Usage Information

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP[®] Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

Application

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (Immunocytochemistry)	1:200
Chromatin IP	1:50
Chromatin IP-seq	1:50
CUT&RUN	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

CBX4 (E6L7X) Rabbit mAb recognizes endogenous levels of total CBX4 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro166 of human CBX4 protein.

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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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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)
ChIP: Chromatin IP **ChIP-seq:** Chromatin IP-seq **C&R:** CUT&RUN

Cross-Reactivity Key

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

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