

PRC1 Antibody

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	70	Rabbit	#O43663	9055

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

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

PRC1 Antibody recognizes endogenous levels of total PRC1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly522 of human PRC1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Protein Regulator of Cytokinesis 1 (PRC1) is a member of the MAP65/ASE1 family of nonmotor microtubule-associated proteins, first described in budding yeast (1,2). PRC1 is a substrate of CDK1, which maintains PRC1 in an inactive, monomeric state (2). Cell-cycle dependent degradation of CDK1 leads to dephosphorylation of PRC1 and subsequent KIF4-mediated translocation to the plus ends of microtubules, where it promotes microtubule bundling by cross-linking antiparallel microtubules (3-5). The microtubule bundling functions of PRC1 play a critical role in maintaining structural integrity of the spindle midzone during cytokinesis (3,6,7).

Background References

1. Pellman, D. et al. (1995) *J Cell Biol* 130, 1373-85.
2. Jiang, W. et al. (1998) *Mol Cell* 2, 877-85.
3. Kurasawa, Y. et al. (2004) *EMBO J* 23, 3237-48.
4. Zhu, C. and Jiang, W. (2005) *Proc Natl Acad Sci USA* 102, 343-8.
5. Subramanian, R. et al. (2010) *Cell* 142, 433-43.
6. Mollinari, C. et al. (2002) *J Cell Biol* 157, 1175-86.
7. Zhu, C. et al. (2006) *Proc Natl Acad Sci USA* 103, 6196-201.

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

Cross-Reactivity Key

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

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