

Rabbit PRC1 Polyclonal Antibody | anti-PRC1 antibody

PRC1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA323694	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

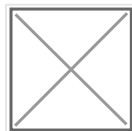
PRODUCT SYNONYMS

PRC1; Polyclonal Antibody; PRC1 Antibody; Anaphase spindle elongation 1 homolog; ASE1; PRC1_HUMAN; Protein regulating cytokinesis 1; Protein regulator of cytokinesis 1; anti-PRC1 antibody

PRODUCT SPECIFICATIONS

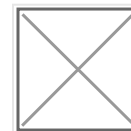
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	PRC1 antibody detects endogenous levels of total PRC1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	525
Applicable Applications for anti-PRC1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PRC1
Subcellular Location	Nucleus. Cytoplasm. Cytoplasm > Cytoskeleton > Spindle Pole. Predominantly localized to the nucleus of interphase cells. During mitosis becomes associated with the mitotic spindle poles and localizes with the cell midbody during cytokinesis.
Tissue Specificity	Overexpressed in bladder cancer cells (PubMed:17409436).
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

AAA323694 staining HepG2 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of PRC1 using K562 whole cell lysates



IHC (Immunohistochemistry)

AAA323694 at 1/100 staining Mouse lung tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-PRC1 antibody	Function: Key regulator of cytokinesis that cross-links antiparallel microtubules at an average distance of 35 nM. Essential for controlling the spatiotemporal formation of the midzone and successful cytokinesis. Required for KIF14 localization to the central spindle and midbody. Required to recruit PLK1 to the spindle. Stimulates PLK1 phosphorylation of RACGAP1 to allow recruitment of ECT2 to the central spindle. Acts as an oncogene for promoting bladder cancer cells proliferation, apoptosis inhibition and carcinogenic progression (PubMed:17409436). Subunit Structure: Homodimer (PubMed:20691902). Interacts with the C-terminal Rho-GAP domain and the basic region of RACGAP1 (PubMed:14744859). The interaction with RACGAP1 inhibits its GAP activity towards CDC42 in vitro, which may be required for maintaining normal spindle morphology (PubMed:14744859). Interacts separately via its N-terminal region with the C-terminus of CENPE, KIF4A and KIF23 during late mitosis (PubMed:15297875, PubMed:16431929). Interacts with KIF14 and KIF20A (PubMed:15625105, PubMed:16431929). Interacts with PLK1 (PubMed:19468300). Interacts with KIF20B (PubMed:17409436). Post-translational Modifications: Phosphorylation by CDK1 in early mitosis holds PRC1 in an inactive monomeric state, during the metaphase to anaphase transition, PRC1 is dephosphorylated, promoting interaction with KIF4A, which then translocates PRC1 along mitotic spindles to the plus ends of antiparallel interdigitating microtubules. Dephosphorylation also promotes MT-bundling activity by allowing dimerization. Phosphorylation by CDK1 prevents PLK1-binding: upon degradation of CDK1 at anaphase and dephosphorylation, it is then phosphorylated by PLK1, leading to cytokinesis. Similarity: Microtubule binding occurs via a basic patch in the central spectrin-like domain and requires also the unstructured C-terminal domain. Belongs to the MAP65/ASE1 family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	389886545
NCBI GeneID	9055
NCBI Accession #	NP_001254509.1
NCBI GenBank Nucleotide #	NM_001267580.1
UniProt Accession #	O43663; Q9BSB6; A6NC44; B4DLR1; H9KV59
Molecular Weight	Observed: 72 kDa Predicted: 72 kDa
NCBI Official Full Name	protein regulator of cytokinesis 1 isoform 4
NCBI Official Synonym Full Names	protein regulator of cytokinesis 1
NCBI Official Symbol	PRC1
NCBI Official Synonym Symbols	ASE1
NCBI Protein Information	protein regulator of cytokinesis 1
UniProt Protein Name	Protein regulator of cytokinesis 1
UniProt Gene Name	PRC1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

