

Rabbit PRC1 Polyclonal Antibody | anti-PRC1 antibody

Phospho-PRC1 (Thr481) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA31450	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (80%), Horse (90%)	Western Blot, Immunohistochemistry, Immunofluorescence, Immunocytochemistry, ELISA

PRODUCT SYNONYMS

PRC1; Polyclonal Antibody; Phospho-PRC1 (Thr481) 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 Predicted Reactivity: Pig (80%), Horse (90%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-PRC1 (Thr481) Antibody detects endogenous levels of PRC1 only when phosphorylated at Thr481. Tissue Specificity: Overexpressed in bladder cancer cells.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-PRC1 antibody	WB (Western Blot), IHC (Immunohistochemistry), IF (Immunofluorescence), ICC (Immunocytochemistry), ELISA (Peptide ELISA)
Application Notes	WB: 1:1000-3000 IF/ICC: 1:100-1:500 IHC: 1:50-1:200 Peptide ELISA: 1:20,000-1:40,000
Immunogen	A synthesized peptide derived from human PRC1 around the phosphorylation site of Thr481.
Conjugation	Unconjugated
Fragment	Fab fragment
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.
Subunit Structure	Homodimer. Interacts with the C-terminal Rho-GAP domain and the basic region of RACGAP1. The interaction with RACGAP1 inhibits its GAP activity towards CDC42 in vitro, which may be required for maintaining normal spindle morphology. Interacts separately via its N-terminal region with the C-terminus of CENPE, KIF4A and KIF23 during late mitosis. Interacts with KIF14 and KIF20A. Interacts with PLK1. Interacts with KIF20B.
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.

Subcellular Location	Nucleus. Cytoplasm. Cytoplasm>Cytoskeleton>Spindle pole. Midbody. Note: Colocalized with KIF20B in the nucleus of bladder carcinoma cells at the interphase. Colocalized with KIF20B in bladder carcinoma cells at prophase, metaphase, early anaphase, at the midzone in late anaphase and at the contractile ring in telophase (PubMed:17409436). 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.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



Application Data

At 25 degree C. Samples were then incubated with primary Ab(At 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI(blue).



IHC (Immunohistochemistry)

At 1/100 staining Human kidney cancer and adjacent normal tissues 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 primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/100 staining Human kidney cancer 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 primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/100 staining Mouse testis 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 primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/100 staining Rat kidney 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 primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/100 staining Rat brain 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 primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-PRC1 antibody	Key regulator of cytokinesis that cross-links antiparrallel 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.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	215273870
NCBI GeneID	9055
UniProt Accession #	O43663; Q9BSB6; A6NC44; B4DLR1; H9KV59
Molecular Weight	620
NCBI Official Full Name	Protein regulator of cytokinesis 1
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; PRC1; protein regulating cytokinesis 1; anaphase spindle elongation 1 homolog
UniProt Protein Name	Protein regulator of cytokinesis 1
UniProt Gene Name	PRC1
UniProt Entry Name	PRC1_HUMAN

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.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/prc1-antibody-western-blot-immunohistochemistry-immunofluorescence-immunocytochemistry-peptide-elisa-elisa/31450>