

**Rabbit Anti-PRC1 Polyclonal: RC0293**

**Intended Use:** For Research Use Only

**Description:** Protein regulator of cytokinesis 1 (PRC1) is a microtubule-bundling protein that is involved in cytokinesis. PRC1 has been identified as a substrate for several Cdks, including Cdc2 and Cdk2. PRC1 binds to the midzone of mitotic spindles during anaphase and is localized to the cell midbody during cytokinesis. Depletion of PRC1 has been shown to prevent cellular cleavage, but it has no effect on nuclear division, demonstrating the importance of PRC1 in mitosis. The yeast homolog of PRC1, Ase1, is essential for spindle assembly, elongation and disassembly during mitosis. Ase1 has been shown to undergo degradation mediated by the APC (anaphase-promoting complex) upon entry into G1 phase. Depletion of PRC1 leads to failed cytokinesis. PRC1 is a substrate of CDK1 and it was assumed that CDK1 phosphorylation blocks its activity during metaphase. Three isoforms of PRC1 exist due to the alternative splicing, with predictive molecular weight of 71.6 kDa, 70.2 kDa and 66.2 kDa, respectively.

**Specifications**

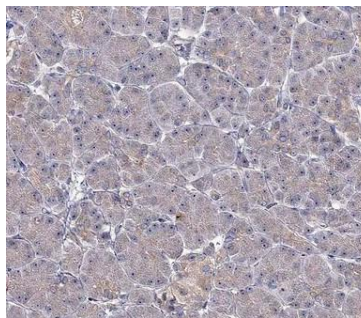
Clone: Polyclonal  
 Source: Rabbit  
 Isotype: IgG  
 Reactivity: Human  
 Immunogen: Recombinant full length protein of human PRC1  
 Localization: Cytoplasm, nucleus  
 Formulation: Antibody in PBS pH7.4, containing BSA and  $\leq 0.09\%$  sodium azide (NaN<sub>3</sub>)  
 Storage: Store at 2°- 8°C  
 Applications: IHC, WB  
 Package:

Description	Catalog No.	Size
PRC1 Concentrated	RC0293	1 ml

**IHC Procedure\***

Positive Control Tissue: Testis, pancreas  
 Concentrated Dilution: 10-50  
 Pretreatment: Tris EDTA pH9.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C  
 Incubation Time and Temp: Overnight @ 4°C  
 Detection: Refer to the detection system manual

\* Result should be confirmed by an established diagnostic procedure.



FFPE human pancreas stained with anti-PRC1 using DAB

**References:**

1. Piperlongumine promotes death of retinoblastoma cancer cells. Nathalie Allaman-Pillet, et al. Oncotarget. Apr 27;12(9):907-916, 2021.
2. Chromokinesin Kif4 promotes proper anaphase in mouse oocyte meiosis. Carissa M Heath, et al. Mol Biol Cell. Jul 1;30(14):1691-1704, 2019.

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