

Product datasheet

Anti-PRC1 antibody [EP1513Y] ab51248

Recombinant RabMAb

★★★★☆ [4 Abreviews](#) [15 References](#) [4 Images](#)

Overview

Product name	Anti-PRC1 antibody [EP1513Y]
Description	Rabbit monoclonal [EP1513Y] to PRC1
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), WB, ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	ICC/IF: HeLa cells Flow Cyt (intra): HeLa cells WB: HeLa, C6 and C2C12 whole cell lysates. Mouse and rat kidney tissue.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	<p>pH: 7.20</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 49% PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA</p>
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP1513Y
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab51248 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/30. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB	★★★★★ (1)	1/1000. Detects a band of approximately 72 kDa (predicted molecular weight: 72 kDa).
ICC/IF	★★★★★ (2)	1/50.

Target

Function

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.

Sequence similarities

Belongs to the MAP65/ASE1 family.

Domain

Microtubule binding occurs via a basic patch in the central spectrin-like domain and requires also the unstructured C-terminal domain.

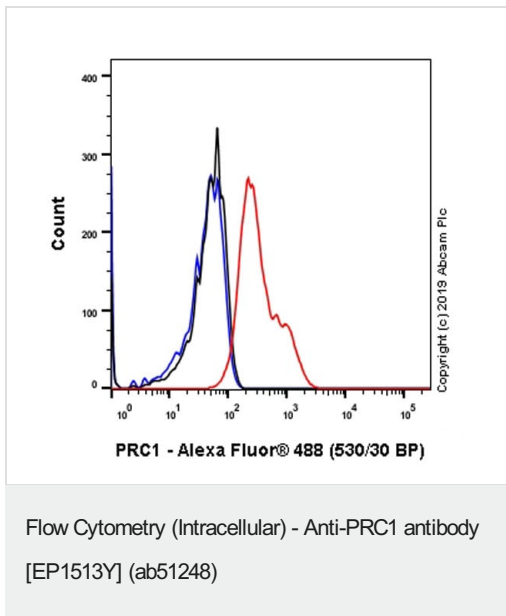
Post-translational modifications

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.

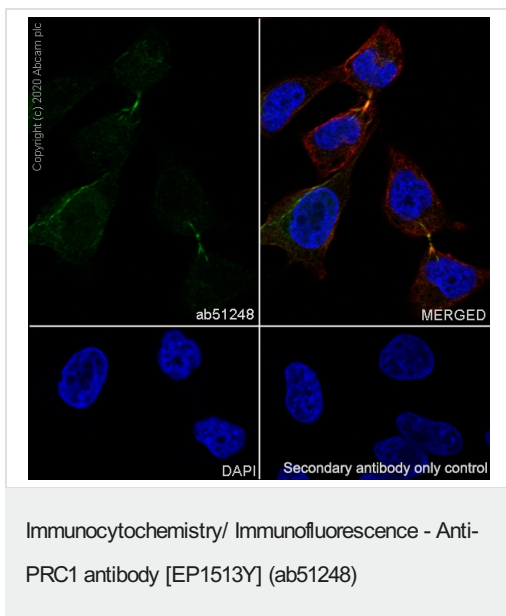
Cellular localization

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.

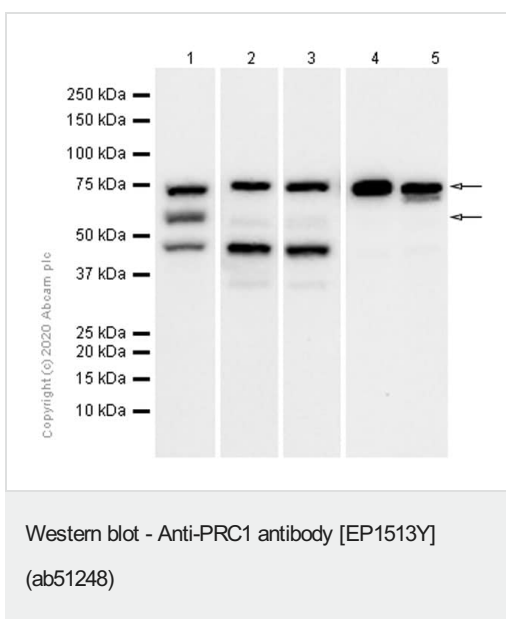
Images



Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling PRC1 with Purified 51248 at 1/30 dilution (10 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling PRC1 with Purified 238427 at 1:50 dilution (5.06 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



All lanes : Anti-PRC1 antibody [EP1513Y] (ab51248) at 1/1000 dilution (Purified)

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

Lane 2 : C6 (Rat glial tumor glial cell) whole cell lysate

Lane 3 : C2C12 (Mouse myoblasts myoblast) whole cell lysate

Lane 4 : Mouse kidney lysate

Lane 5 : Rat kidney lysate

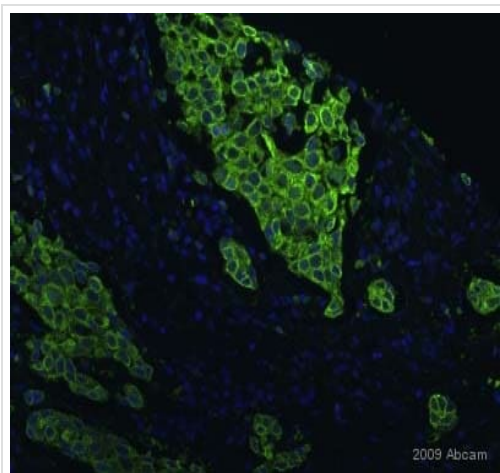
Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Predicted band size: 72 kDa

ab51248 recognise two isoforms of PRC1. But we are unsure how to define the extra bands at ~50kDa.



Immunocytochemistry/ Immunofluorescence - Anti-PRC1 antibody [EP1513Y] (ab51248)

This image is courtesy of an anonymous Abreview

ab51248 staining PRC1 in human breast cancer cells by ICC/IF. The cells were paraformaldehyde fixed and blocked in 1% serum for 1 hour at 37°C without permeation step. The primary antibody was diluted 1/100 (PBS) and incubated with sample for 1 hour at 20°C. An Alexa Fluor® 488 conjugated donkey polyclonal to rabbit IgG, diluted 1/200 was used as secondary.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors