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Datasheet for 600-401-478

# PC2 Antibody

## Overview

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| **Description:** | Anti-PC2 (RABBIT) Antibody - 600-401-478 |
| **Item No.:** | 600-401-478 |
| **Size:** | 100 µg |
| **Applications:** | ELISA, IF, WB |
| **Reactivity:** | Human |
| **Host Species:** | Rabbit |

## Product Details

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| **Background:** | PC2 is the human homolog of the Drosophila 'Polycomb' (Pc) protein which has been identified as a gene family member associated with a cellular memory system that is responsible for the inheritance of gene activity by progeny cells. The human Pc homolog gene is more closely related to a Xenopus Pc homolog, XPc, than to a previously described human Pc homolog, CBX2 (hPc1). However, the hPc2 and CBX2/hPc1 proteins are shown to colocalize in interphase nuclei of human U-2 OS osteosarcoma cells, suggesting that the proteins are part of a common protein complex. The human protein is believed to function as a repressor of proto-oncogene activity and that interference with hPc2 function can lead to depression of proto-oncogene transcription and subsequently to cellular transformation. Other reports describe PC2 as a protein that has SUMO E3 activity for the corepressors CtBP and CtBP2. |
| **Synonyms:** | rabbit anti-PC2 antibody, E3 SUMO-protein ligase CBX4, Chromobox protein homolog 4, Polycomb 2 homolog, Pc2, hPc2, CBX4 |
| **Host Species:** | Rabbit |
| **Clonality:** | Polyclonal |
| **Format:** | IgG |

## Target Details

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| **Gene Name:** | CBX4 |
| **Reactivity:** | Human |
| **Immunogen Type:** | Conjugated Peptide |

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| **Immunogen:** | This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region near aa 90-115 of Human PC2 protein. |
| **Purity/Specificity:** | This is an affinity purified antibody produced by immunoaffinity chromatography using the immunizing peptide after immobilization to a solid phase. Reactivity occurs against human PC2 protein. |
| **Relevant Links:** | • GeneCards - GC17M079833<br>• UniProtKB - O00257<br>• NCBI - O00257.3<br>• GeneID - 8535 |

## Application Details

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| **Tested Applications:** | ELISA, IF, WB |
| **Application Note:** | Anti-PC2 antibody has been tested for use in ELISA, WB, and IF. This affinity purified antibody is useful in immunofluorescence staining of cultured cells. In immunofluorescence, this antibody detects the expected discrete nuclear structure that is termed the PcG body, corresponding to the known localization of PC2. This affinity purified antibody is useful in western blotting using transfected cell lysates. Dilutions for western blotting represent a starting point dilution and further optimization may be required. The antibody detects a band of approximately 82 kDa (predicted molecular weight: 61.4 kDa). The antibody has been successfully used to detect FLAG-tagged transfected hPC2 (see figure). It detects a weak band that probably corresponds to endogenous PC2, however, a strong secondary band is also seen at 50kD in all cell lines thus far tested. This suggests that the antibody may also react with another highly expressed ubiquitous protein. Reactivity in other immunoassays is unknown. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **ELISA:** | 1:10,000 - 1:40,000 |
| **IF:** | 1:100 - 1:400 |
| **IP:** | 1:100 |
| **WB:** | 1:1,000 - 1:4,000 |

## Formulation

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| **Physical State:** | Liquid (sterile filtered) |
| **Concentration:** | 1.36 mg/mL by UV absorbance at 280 nm |
| **Buffer:** | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 |

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| **Preservative:** | 0.01% (w/v) Sodium Azide |
| **Stabilizer:** | None |

## Shipping & Handling

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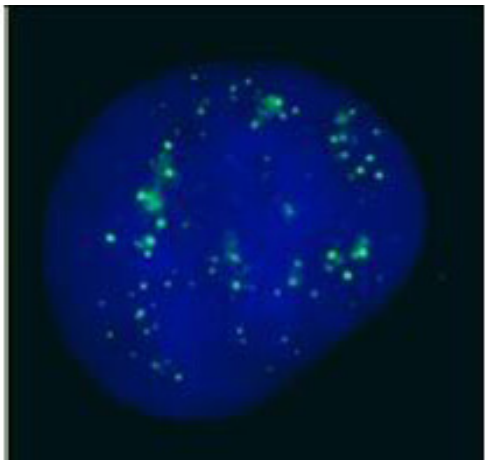
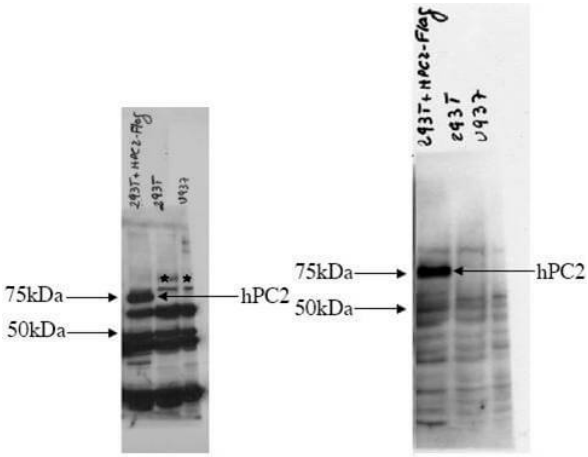
| **Shipping Condition:** | Dry Ice |
| **Storage Condition:** | Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. |
| **Expiration:** | Expiration date is one (1) year from date of receipt. |

## Images






**Immunofluorescence Microscopy**
Rockland's anti-hPC2 antibody was used for immunofluorescent imaging of human cells (U2OS). The image reveals the expected discrete nuclear structure that is termed the PcG body corresponding to the known localization of PC2 (see Satijn et al. below). IF was performed after fixation in PBS with 4% PF for 5 min, permeabilization with 0.5% Triton X100-PBS for 5 min, and blocking with 5% milk / 0.2% Tween for 1 h. Primary antibody used at 1:200 in 5% milk / 0.2% Tween for 1 h, secondary antibody for 30 min. All blocking and incubation steps carried out at 37° C. Nuclei were counterstained with Hoechst stain (blue). Data contributed by Luke Hughes-Davies and Rhiannon Jade, Gurdon Institute, Cambridge, UK.

**Western Blot**
Analysis shows the detection of human PC2 in probed lysates using Rockland's Affinity Purified anti-hPC2 antibody.

## Disclaimer

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