abcam

Product datasheet

Anti-CBX4 antibody ab4189

1 References 2 Images

Overview

Product name	Anti-CBX4 antibody
Description	Rabbit polyclonal to CBX4
Host species	Rabbit
Specificity	In immunofluoresence, this antibody detects the expected discrete nuclear structure that is termed the PcG body, corresponding to the known localisation of PC2. The antibody has been successfully used to detect FLAG-tagged transfected hPC2 (see picture). 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 also reacts with another ubiquitous highly expressed protein.
Tested applications	**Suitable for:** ICC/IF, WB
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide: GLQDSSTDNRAKLC , corresponding to amino acids 95 - 107 of Human PC2. Run BLAST with Run BLAST with
General notes	PC2 and other members of the Drosophila Polycomb group gene family are part of a cellular memory system that is responsible for the inheritance of gene activity by progeny cells. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Storage buffer	Preservative: 0.01% Sodium azide Constituents: 0.42% Potassium phosphate, 0.87% Sodium chloride
Purity	Immunogen affinity purified
Purification notes	This is an affinity purified antibody produced by immunoaffinity chromatography using the immunizing peptide after immobilization to a solid phase.
Primary antibody notes	PC2 and other members of the Drosophila Polycomb group gene family are part of a cellular memory system that is responsible for the inheritance of gene activity by progeny cells.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab4189 in the following tested applications.

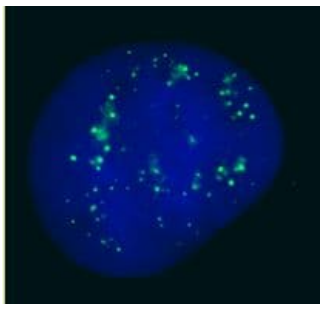
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use at an assay dependent dilution.
WB		Use at an assay dependent dilution. Detects a band of approximately 82 kDa (predicted molecular weight: 61 kDa).

Target

Function	E3 SUMO-protein ligase which facilitates SUMO1 conjugation by UBE2I. Component of the Polycomb group (PcG) multiprotein PRC1 complex, a complex required to maintain the transcriptionally repressive state of many genes, including Hox genes, throughout development. PcG PRC1 complex acts via chromatin remodeling and modification of histones; it mediates monoubiquitination of histone H2A 'Lys-119', rendering chromatin heritably changed in its expressibility.
Tissue specificity	Ubiquitous.
Pathway	Protein modification; protein sumoylation.
Sequence similarities	Contains 1 chromo domain.
Post-translational modifications	Phosphorylated on Thr-497 by HIPK2 upon DNA damage; which enhances E3 SUMO-protein ligase activity and promotes sumoylation on Lys-494.
Cellular localization	Nucleus.

Images

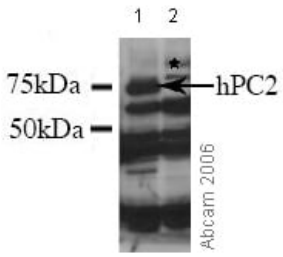


Immunocytochemistry/ Immunofluorescence - Anti-CBX4 antibody (ab4189)

This image is courtesy of Luke Hughes-Davies and Rhiannon Jade, Gurdon Institute, Cambridge, UK

Immunofluorescent imaging of human cells (U2OS) with ab4189 reveals the expected discrete nuclear structure that is termed the PcG body corresponding to the known localisation of PC2. This corresponds to results seen in Satijn et al.

IF was performed with a standard paraformaldehyde technique (fixed in PBS buffered PFH 4% for 5 minutes, permeabilised with 0.5% triton-PBS for 5 minutes, blocked with 5% milk / 0.2% tween for one hour. Primary antibody used at 1/200 in 5% milk / 0.2% TWEEN for one hour, secondary antibody for 30 minutes. All blocking and incubation steps carried out at 37 degrees C. Nuclei counterstained with Hoechst stain (blue).



Western blot - Anti-CBX4 antibody (ab4189)

This image is courtesy of Dr Ari Melnick, Albert Einstein College of Medicine

All lanes : Anti-CBX4 antibody (ab4189)

Lane 1 : HEK 293 lysate over-expressing DDDDK tagged hPC2
Lane 2 : HEK 293 lysate

Predicted band size: 61 kDa
Observed band size: 75 kDa
Additional bands at: 30 kDa (possible non-specific secondary antibody binding), 49 kDa (possible non-specific secondary antibody binding), 65 kDa (possible non-specific secondary antibody binding)

ab4189 specifically recognises over expressed DDDDK tagged hPC2 in HEK293 cells (lane1). The lower bands are assigned to degradation products.

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