

Product datasheet

Anti-CBX1 / HP1 beta antibody [MAC353] ab10811

KO VALIDATED

★★★★☆ [2 Abreviews](#) [13 References](#) [3 Images](#)

Overview

Product name	Anti-CBX1 / HP1 beta antibody [MAC353]
Description	Rat monoclonal [MAC353] to CBX1 / HP1 beta
Host species	Rat
Specificity	Ab10811 recognises the M31 molecule in mouse and the homologous HP1 HS beta molecule in man.
Tested applications	Suitable for: WB, ICC/IF, IP, ELISA, IHC-Fr, ChIP
Species reactivity	Reacts with: Mouse, Human
Immunogen	Fusion protein corresponding to Mouse CBX1/ HP1 beta (C terminal). Database link: P83917
Positive control	Murine and human nuclear extracts.
General notes	<p>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.</p> <p>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</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.09% Sodium azide Constituent: 5% BSA
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	MAC353
Isotype	IgG2b

Applications

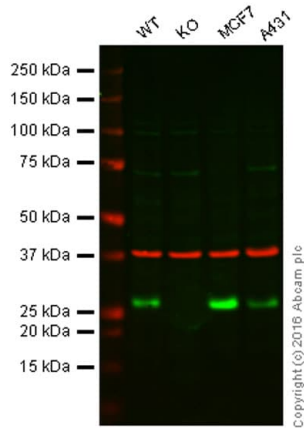
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab10811 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (1)	Use at an assay dependent concentration. Detects a band of approximately 26 kDa (predicted molecular weight: 22.2 kDa).
ICC/IF	★★★★☆ (1)	Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
ELISA		Use at an assay dependent concentration.
IHC-Fr		Use at an assay dependent concentration.
ChIP		Use at an assay dependent concentration.

Target

Function	Component of heterochromatin. Recognizes and binds histone H3 tails methylated at 'Lys-9', leading to epigenetic repression. Interaction with lamin B receptor (LBR) can contribute to the association of the heterochromatin with the inner nuclear membrane.
Tissue specificity	Expressed in all adult and embryonic tissues.
Sequence similarities	Contains 2 chromo domains.
Post-translational modifications	Not phosphorylated. Ubiquitinated.
Cellular localization	Nucleus. Unassociated with chromosomes during mitosis.

Images



Western blot - Anti-CBX1 / HP1 beta antibody [MAC353] - ChIP Grade (ab10811)

Lane 1: Wild-type HAP1 cell lysate (40 µg)

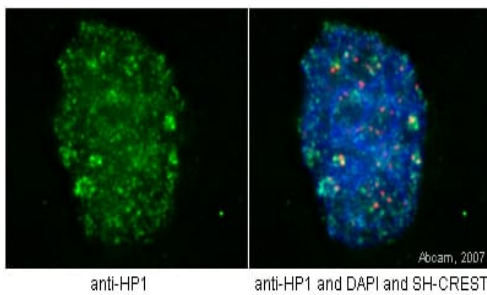
Lane 2: CBX1 knockout HAP1 cell lysate (40 µg)

Lane 3: MCF7 cell lysate (40 µg)

Lane 4: A431 cell lysate (40 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab10811 observed at 26 kDa. Red - loading control, **ab181602**, observed at 37 kDa.

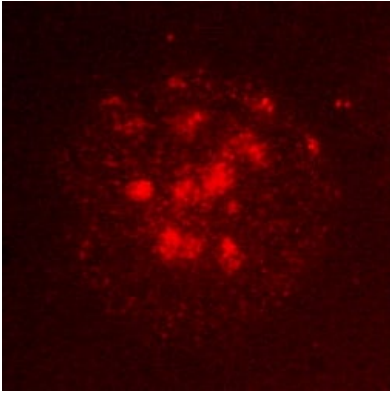
ab10811 was shown to specifically react with CBX1 / HP1 beta when CBX1 / HP1 beta knockout samples were used. Wild-type and CBX1 / HP1 beta knockout samples were subjected to SDS-PAGE. Ab10811 and **ab181602** (loading control to GAPDH) were diluted at 1/500 and 1/10000 dilution respectively and incubated overnight at 4C. Blots were developed with Goat anti-Rat IgG H&L (IRDye® 800CW) (**ab253031**) preadsorbed and Goat Anti-Rabbit IgG H&L (IRDye® 680RD) preadsorbed (**ab216777**) secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Immunocytochemistry/ Immunofluorescence - Anti-CBX1 / HP1 beta antibody [MAC353] - ChIP Grade (ab10811)

This image is courtesy of Scott Slattery and Mke Mancini

HeLA cells were stained with ab10811 in panel one. In panel two they were stained with ab10811 (green), DAPI (blue) and SH-CREST (red), which stains the centromeres. Fix 30 minutes on ice in 4% formaldehyde in PEM. Quench autofluorescence 2 x 5 minutes with 1 mg/ml Na borohydride or 100 mM ammonium chloride in PEM. Permeabilize 30 minutes with 0.5% TX-100 in PEM. Block 30 minutes in 5% milk in TBST. Primary antibody incubated overnight at 4°C diluted 1/100 in 5% milk in TBST. Secondary antibody incubated 1 hour at RT diluted in 5% milk in TBST. Post-fix 20 minutes on ice in 4% formaldehyde in PEM. Quench autofluorescence 2 x 5 minutes with ammonium chloride in PEM. Counterstain with DAPI in TBST. Mount with ProLong Gold antifade reagent from Invitrogen. Notes: Ample washing between each step. TBST = Tris buffered saline + 0.1% Tween. PEM = 80 mM K-PIPES, pH 6.8, 5 mM EGTA, 2 mM MgCl₂.



Immunofluorescence analysis of mouse erythroleukemia cell nuclei, staining CBX1 / HP1 beta in heterochromatin, with ab10811.

Cells were fixed with paraformaldehyde, permeabilized using Triton X-100 and blocked for 30 min with 2.5% BSA. Cells were incubated with primary antibody (1/50) before incubating with a Cy3-conjugated goat anti-rat IgG to detect staining.

Immunocytochemistry/ Immunofluorescence - Anti-CBX1 / HP1 beta antibody [MAC353] (ab10811)

Image from Talasz H et al., J Biol Chem. 2005 Nov 18;280(46):38814-22. Epub 2005 Sep 15. Fig 1.; doi: 10.1074/jbc.M505563200; November 18, 2005 The Journal of Biological Chemistry, 280, 38814-38822.

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