


Product datasheet

Anti-CBX1 / HP1 beta antibody ab10478

KO VALIDATED

★★★★★ [10 Abreviews](#) [29 References](#) [6 Images](#)

Overview

Product name	Anti-CBX1 / HP1 beta antibody
Description	Rabbit polyclonal to CBX1 / HP1 beta
Host species	Rabbit
Specificity	ab10478 recognises a band at 25 kDa, which is attributed to CBX1 / HP1 beta.
Tested applications	Suitable for: WB, ICC/IF, IHC-P, IP
Species reactivity	Reacts with: Mouse, Rat, Human, Marsupial Predicted to work with: Chicken, Hamster, Drosophila melanogaster 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HEK293T, HAP1, MCF7, A431, HeLa and PC12 cell lysates. IP: HeLa cell lysate.
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	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

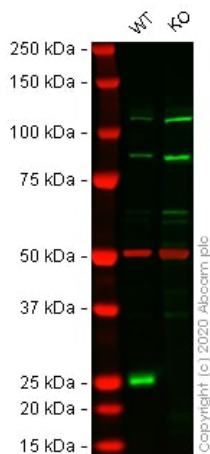
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab10478 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (5)	1/500 - 1/1000. Detects a band of approximately 25 kDa (predicted molecular weight: 21 kDa).
ICC/IF	★★★★★ (3)	Use at an assay dependent concentration.
IHC-P	★★★★★ (2)	Use at an assay dependent concentration.
IP		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 (ab10478)

All lanes : Anti-CBX1 / HP1 beta antibody (ab10478) at 1/1000 dilution

Lane 1 : Wild-type HEK-293T cell lysate

Lane 2 : CBX1 knockout HEK-293T cell lysate

Lysates/proteins at 20 µg per lane.

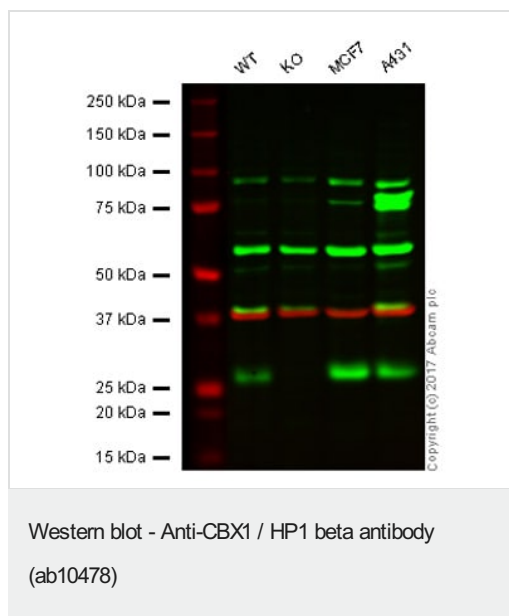
Performed under reducing conditions.

Predicted band size: 21 kDa

Observed band size: 26 kDa

Lanes 1- 2: Merged signal (red and green). Green - ab10478 observed at 26 kDa. Red - Anti-alpha Tubulin antibody [DM1A] - Loading Control ([ab7291](#)) observed at 50 kDa.

ab10478 was shown to react with CBX1 / HP1 beta in wild-type HEK-293T cells in western blot. Loss of signal was observed when knockout cell line [ab266356](#) (knockout cell lysate [ab257383](#)) was used. Wild-type HEK-293T and CBX1 knockout HEK-293T cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. ab10478 and Anti-alpha Tubulin antibody [DM1A] - Loading Control ([ab7291](#)) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Lane 1: Wild type HAP1 whole cell lysate (20 µg)

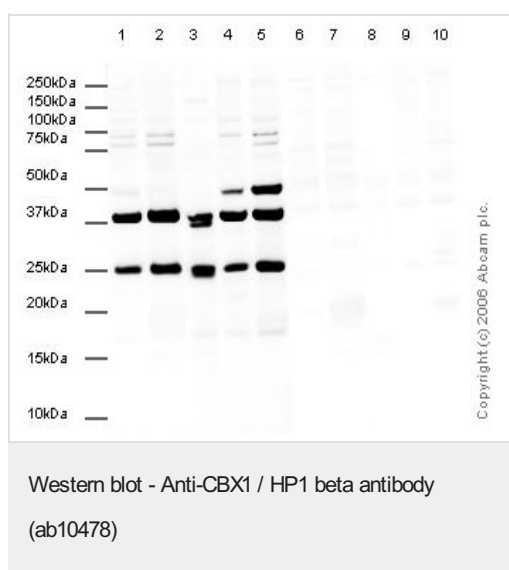
Lane 2: CBX1 knockout HAP1 whole cell lysate (20 µg)

Lane 3: MCF7 whole cell lysate (20 µg)

Lane 4: A431 whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab10478 observed at 26 kDa. Red - loading control, [ab8245](#), observed at 37 kDa.

ab10478 was shown to recognize CBX1 when CBX1 knockout samples were used, along with additional cross-reactive bands. Wild-type and CBX1 knockout samples were subjected to SDS-PAGE. Ab10478 and [ab8245](#) (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1000 dilution and 1/10000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed [ab216773](#) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed [ab216776](#) secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



All lanes : Anti-CBX1 / HP1 beta antibody (ab10478) at 1 µg/ml

Lane 1 : HeLa whole cell lysate

Lane 2 : HeLa nuclear lysate

Lane 3 : A431 cell lysate

Lane 4 : MCF7 cell lysate

Lane 5 : HEK293 cell lysate

Lane 6 : HeLa whole cell lysate with CBX1 / HP1 beta peptide ([ab30861](#)) at 1 µg/ml

Lane 7 : HeLa nuclear lysate with CBX1 / HP1 beta peptide ([ab30861](#)) at 1 µg/ml

Lane 8 : A431 lysate with CBX1 / HP1 beta peptide ([ab30861](#)) at 1 µg/ml

Lane 9 : MCF7 cell lysate with CBX1 / HP1 beta peptide ([ab30861](#)) at 1 µg/ml

Lane 10 : HEK293 cell lysate with CBX1 / HP1 beta peptide ([ab30861](#)) at 1 µg/ml

Lysates/proteins at 20 µg per lane.

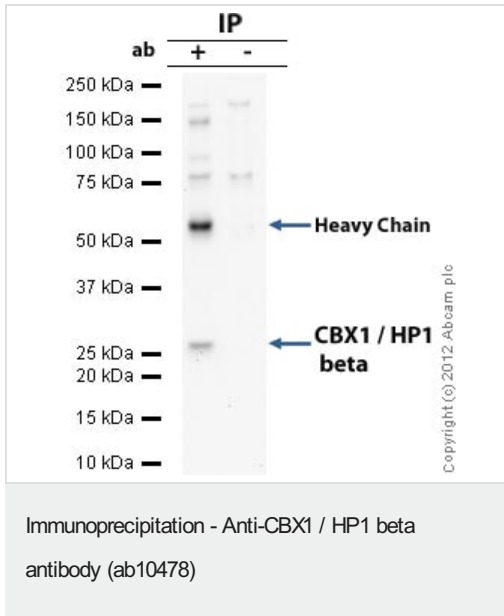
Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab6721](#)) at 1/5000 dilution

Predicted band size: 21 kDa

Observed band size: 25 kDa

Additional bands at: 37 kDa (possible cross reactivity), 47 kDa (possible cross reactivity)



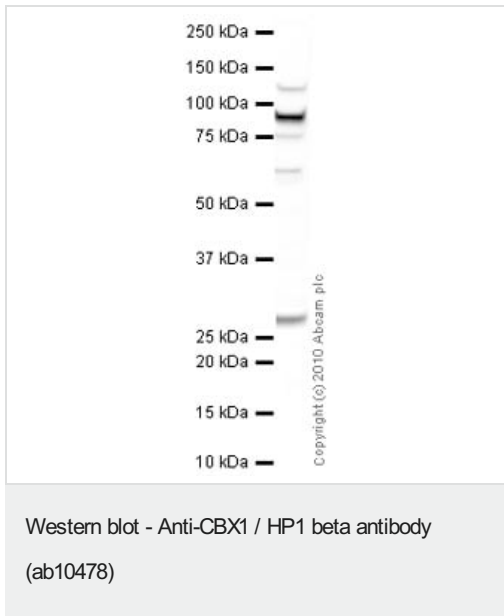
CBX1 / HP1 beta was immunoprecipitated using 0.5mg Hela whole cell extract, 5µg of Rabbit polyclonal to CBX1 / HP1 beta and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).

The antibody was incubated under agitation with Protein G beads for 10min, Hela whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab10478.

Secondary: Clean blot (HRP conjugate) at 1/1000 dilution.

Band: 20ka: CBX1 / HP1 beta.



Anti-CBX1 / HP1 beta antibody (ab10478) at 1 µg/ml + PC12 (Rat adrenal pheochromocytoma cell line) Whole Cell Lysate at 10 µg

Secondary

Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

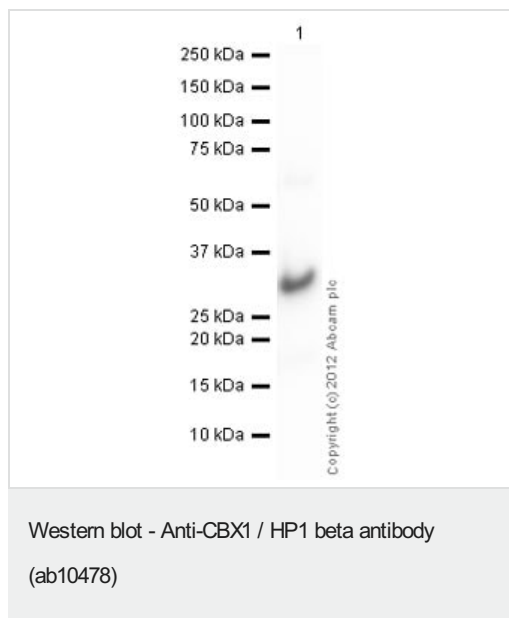
Performed under reducing conditions.

Predicted band size: 21 kDa

Observed band size: 27 kDa

Additional bands at: 90 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 4 minutes



Anti-CBX1 / HP1 beta antibody (ab10478) at 1/500 dilution +
Recombinant Human CBX1 / HP1 beta protein ([ab109847](#)) at 0.01
µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed ([ab97080](#)) at
1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 21 kDa

Exposure time: 10 seconds

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