

## Anti-HP1 gamma/CBX3 Antibody Picoband®

Catalog Number: A01142

### About CBX3

Chromobox protein homolog 3 is a protein that is encoded by the CBX3 gene in humans. At the nuclear envelope, the nuclear lamina and heterochromatin are adjacent to the inner nuclear membrane. The protein encoded by this gene binds DNA and is a component of heterochromatin. This protein also can bind lamin B receptor, an integral membrane protein found in the inner nuclear membrane. The dual binding functions of the encoded protein may explain the association of heterochromatin with the inner nuclear membrane. This protein binds histone H3 tails methylated at Lys-9 sites. This protein is also recruited to sites of ultraviolet-induced DNA damage and double-strand breaks. Two transcript variants encoding the same protein but differing in the 5' UTR, have been found for this gene.

### Overview

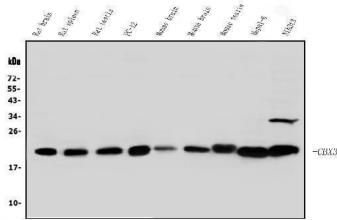
Product Name	Anti-HP1 gamma/CBX3 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-HP1 gamma/CBX3 Antibody Picoband® catalog # A01142. Tested in ELISA, Flow Cytometry, IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IF, IHC, IHC-F, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q13185

### Technical Details

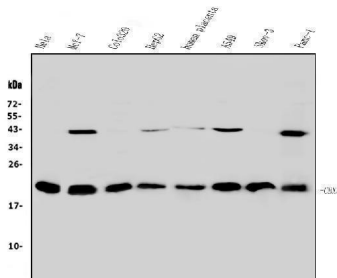
Immunogen	E. coli-derived human HP1 gamma recombinant protein (Position: A2-Q183).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG

Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10 <sup>6</sup> cells, Human ELISA, 0.1-0.5ug/ml, -

## Anti-HP1 gamma/CBX3 Antibody Picoband® (A01142) Images

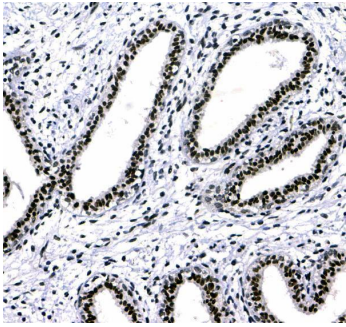


Western blot analysis of HP1 gamma using anti-HP1 gamma antibody (A01142). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: rat spleen tissue lysate, Lane 3: rat testis tissue lysate, Lane 4: rat PC-12 whole cell lysate, Lane 5: mouse brain tissue lysate, Lane 6: mouse brain tissue lysate, Lane 7: mouse testis tissue lysate, Lane 8: mouse HEPA1-6 whole cell lysate, Lane 9: mouse NIH/3T3 whole cell lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-HP1 gamma antigen affinity purified polyclonal antibody (Catalog # A01142) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for HP1 gamma at approximately 21KD. The expected band size for HP1 gamma is at 21KD.

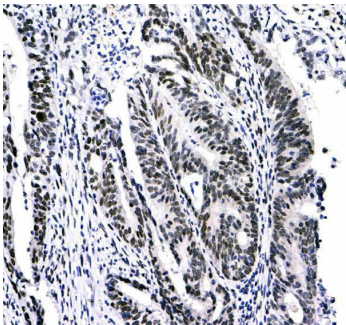


Western blot analysis of HP1 gamma using anti-HP1 gamma antibody (A01142). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human Hela whole cell lysate, Lane 2: human MCF-7 whole cell lysate, Lane 3: human COLO320 whole cell lysate, Lane 4: human HepG2 whole cell lysate, Lane 5: human placenta tissue lysate, Lane 6: human A549 whole cell lysate, Lane 7: human SKOV-3 whole cell lysate, Lane 8: human PANC-1 whole cell lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-HP1 gamma antigen affinity purified polyclonal antibody (Catalog # A01142) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for HP1 gamma at approximately 21KD. The expected band size for HP1 gamma is at 21KD.

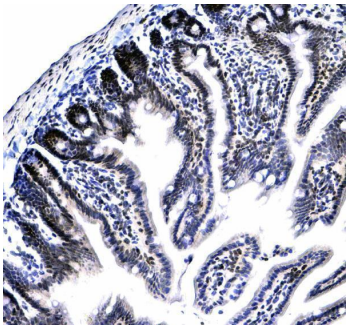
IHC analysis of HP1 gamma using anti-HP1 gamma antibody (A01142). HP1 gamma was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated



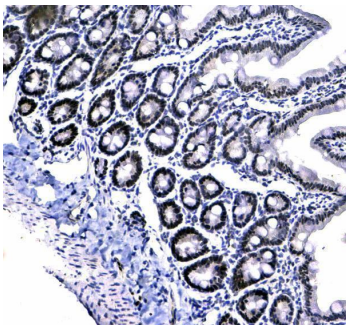
antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-HP1 gamma Antibody (A01142) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of HP1 gamma using anti-HP1 gamma antibody (A01142). HP1 gamma was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-HP1 gamma Antibody (A01142) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

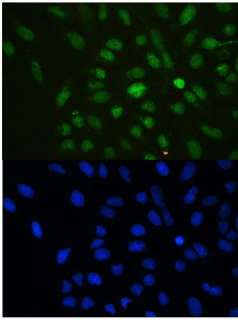


IHC analysis of HP1 gamma using anti-HP1 gamma antibody (A01142). HP1 gamma was detected in paraffin-embedded section of mouse small intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-HP1 gamma Antibody (A01142) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

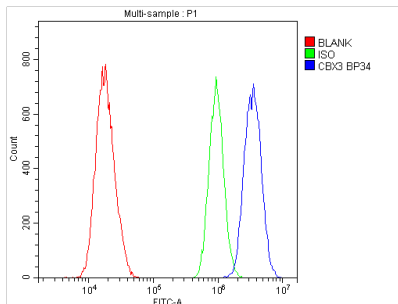


IHC analysis of HP1 gamma using anti-HP1 gamma antibody (A01142). HP1 gamma was detected in paraffin-embedded section of rat small intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-HP1 gamma Antibody (A01142) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

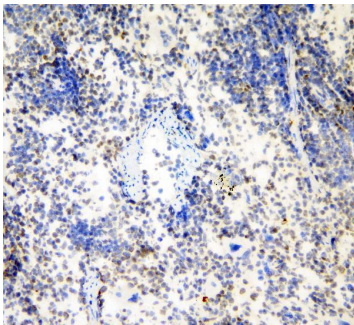
IF analysis of HP1 gamma using anti-HP1 gamma antibody (A01142). HP1 gamma was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat



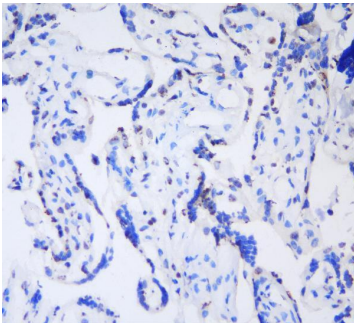
serum. And then incubated with 2ug/mL rabbit anti-HP1 gamma Antibody (A01142) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of A431 cells using anti-HP1 gamma antibody (A01142). Overlay histogram showing A431 cells stained with A01142 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-HP1 gamma Antibody (A01142, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

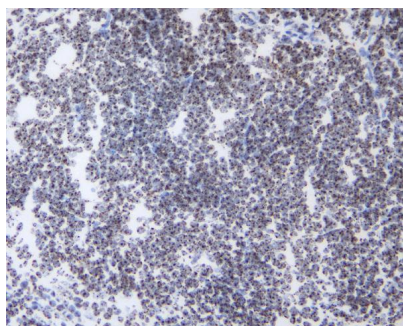


IHC analysis of HP1 gamma using anti-HP1 gamma antibody (A01142). HP1 gamma was detected in frozen section of rat spleen tissues. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-HP1 gamma Antibody (A01142) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of HP1 gamma using anti-HP1 gamma antibody (A01142). HP1 gamma was detected in frozen section of human placenta tissues. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-HP1 gamma Antibody (A01142) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

IHC analysis of HP1 gamma using anti-HP1 gamma antibody (A01142). HP1 gamma was detected in frozen section of mouse spleen tissues. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-HP1 gamma Antibody (A01142) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C.



The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

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Anti-HP1 gamma/CBX3 Antibody

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