

Anti-CENPA Antibody Picoband™

Catalog Number: PB9538

About CENPA

Centromeres are the differentiated chromosomal domains that specify the mitotic behavior of chromosomes. CENPA encodes a centromere protein which contains a histone H3 related histone fold domain that is required for targeting to the centromere. And CENPA is proposed to be a component of a modified nucleosome or nucleosome-like structure in which it replaces 1 or both copies of conventional histone H3 in the (H3-H4)₂ tetrameric core of the nucleosome particle. Alternative splicing results in multiple transcript variants encoding distinct isoforms. In higher eukaryotes, the recruitment of CENP-A nucleosomes to existing centromeres is an epigenetic process, independent of the underlying DNA sequence. In *S.pombe*, de novo recruitment of the CENP-A to the centromere is believed to be controlled by "centromeric" heterochromatin surrounding the centromere, and by an RNAi mechanism. The RNAi is cut to form siRNA; this complexes with the protein Chp1, which then binds the centromeric heterochromatin. This helps recruit other proteins, ultimately resulting in a protein complex that forms cohesin between two sister chromatids at the centromeric heterochromatin. This cohesin is believed to be essential in replacing the centromere H3 with CENP-A. CENP-A is one of the epigenetic changes that is believed to distinguish centromeric DNA from other DNA. Once the CENP-A has been added, the centromere becomes self-propagating, and the surrounding heterochromatin/RNAi mechanism is no longer necessary.

Overview

Product Name	Anti-CENPA Antibody Picoband™
Reactive Species	Human, Rat
Description	Boster Bio Anti-CENPA Antibody Picoband™ catalog # PB9538. Tested in WB applications. This antibody reacts with Human, Rat.
Application	WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Na ₃ .
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	P49450

Technical Details

Immunogen	E.coli-derived human CENPA recombinant protein (Position: M1-G140). Human CENPA shares 71.6% amino acid (aa) sequence identity with mouse CENPA.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
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 µg/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used Western blot, 0.1-0.5 µg/ml, Human, Rat</p> <p>For protocols, please visit https://www.bosterbio.com/protocol-and-troubleshooting/</p>

Anti-CENPA Antibody Picoband™ (PB9538) Images

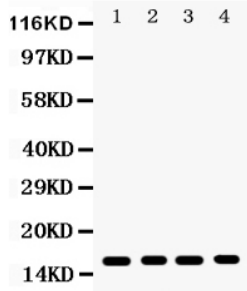


Figure 1. Western blot analysis of CENPA using anti-CENPA antibody (PB9538).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.

Lane 1: Rat Liver Tissue Lysate at 50ug,

Lane 2: Rat Lung Tissue Lysate at 50ug,

Lane 3: Rat Pancreas Tissue Lysate at 50ug,

Lane 4: HELA Whole Cell Lysate at 40ug.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-CENPA antigen affinity purified polyclonal antibody (Catalog # PB9538) 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 1:5000 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 CENPA at approximately 16 kDa. The

expected band size for CENPA is at 16 kDa.

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