BOSTER BIOLOGICAL TECHNOLOGY
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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.

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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. 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	WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
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.

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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 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Rat

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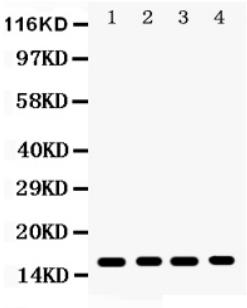
Anti-CENPA Antibody Picoband® (PB9538) Images



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.

Anti-CENPA Antibody

For Research Use Only. Not for use in diagnostic procedures.