

Anti-SMC5 Antibody Picoband™

Catalog Number: A01285

About SMC5

Structural maintenance of chromosomes protein 5 is a protein encoded by the SMC5 gene in human. Predicted to enable ATP binding activity. Involved in several processes, including DNA recombination; cellular senescence; and positive regulation of maintenance of mitotic sister chromatid cohesion. Located in cell junction; chromosome; and nuclear body. Part of Smc5-Smc6 complex.

Overview

Product Name	Anti-SMC5 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-SMC5 Antibody Picoband™ catalog # A01285. Tested in ELISA, Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, Flow Cytometry, IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	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 freezing and thawing.
Host	Rabbit
Uniprot ID	Q8IY18

Technical Details

Immunogen	E.coli-derived human SMC5 recombinant protein (Position: Q14-Q1089).
Predicted Reactive Species	Human
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 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 µg/ml.
Purification	Immunogen affinity purified.

Suggested Dilutions

Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.

If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.

Some PubMed article(s) citing the expression level of this target are as follows:

Boster Bio's internal QC testing used:

Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat

Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human

Flow Cytometry, 1-3 µg/1x10⁶ cells, Human

Direct ELISA, 0.1-0.5 µg/ml, Human

Anti-SMC5 Antibody Picoband™ (A01285) Images

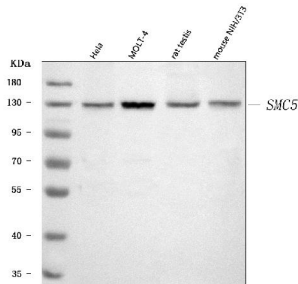


Figure 1. Western blot analysis of SMC5 using anti-SMC5 antibody (A01285).

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 30 ug of sample under reducing conditions.

Lane 1: human HeLa whole cell lysates,

Lane 2: human MOLT-4 whole cell lysates,

Lane 3: rat testis tissue lysates,

Lane 4: mouse NIH/3T3 whole cell lysates.

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-SMC5 antigen affinity purified polyclonal antibody (Catalog # A01285) 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 SMC5 at approximately 130 kDa. The expected band size for SMC5 is at 129 kDa.

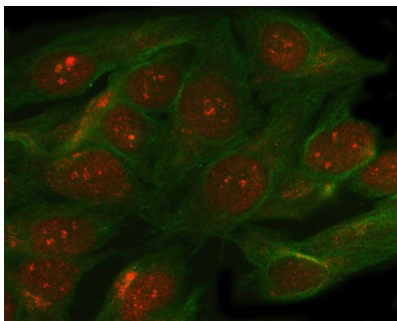


Figure 2. IF analysis of SMC5 using anti-SMC5 antibody (A01285) and anti-Beta Tubulin antibody (M01857-3).

SMC5 was detected in immunocytochemical section of HeLa 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 5 ug/mL rabbit anti-SMC5 Antibody (A01285) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) and DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

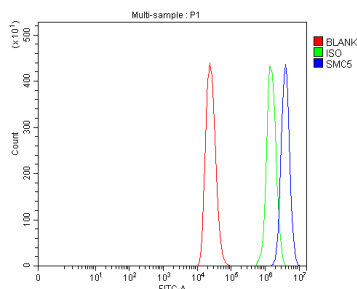


Figure 3. Flow Cytometry analysis of THP-1 cells using anti-SMC5 antibody (A01285).

Overlay histogram showing THP-1 cells stained with A01285 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SMC5 Antibody (A01285, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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