BOSTER BIOLOGICAL TECHNOLOGY
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888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-MIS12 Antibody Picoband®

Catalog Number: A06832-1

About MIS12

Protein MIS12 homolog is a protein that in humans is encoded by the MIS12 gene. Mis12 complex is composed of four subunits, Protein MIS12 homolog, Polyamine-modulated factor 1, Kinetochore-associated protein DSN1 homolog, and Kinetochore-associated protein NSL1 homolog (UniProt: Q9H081, Q6P1K2, Q9H410, Q96IY1, respectively) that are encoded by genes known as MIS12 (Gene ID: 79003), PMF1 (Gene ID: 100527963), DSN1 (Gene ID: 79980), and NSL1 (also known as C1orf48, DC31, DC8, MIS14) (Gene ID: 25936) in human. The MIS12 complex is a protein interaction hub for outer kinetochore assembly. This complex acts as the primary microtubule-binding interface at kinetochores and provides a platform to recruit regulatory proteins. In human Mis12 complex subunits are shown to localize with centromere protein A (CENP-A) at inner kinetochores and internally to Ndc80 at outer kinetochores. Mis12 complex plays an essential role in chromosome segregation in vertebrates and contributes to mitotic kinetochore assembly. Reduced levels of Mis12 complex proteins are shown to result in chromosome alignment defects in both human and chicken cells, but spindle bipolarity is not disturbed.

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Overview

Product Name	Anti-MIS12 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-MIS12 Antibody Picoband® catalog # A06832-1. Tested in ELISA, IF, ICC, WB, Flow Cytometry applications. This antibody reacts with Human. 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, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
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	Q9H081

Technical Details

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Immunogen	E.coli-derived human MIS12 recombinant protein (Position: M1-K187).
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	Western blot, 0.1-0.25 ug/ml, Human Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10^6 cells, Human ELISA, 0.1-0.5 ug/ml, - Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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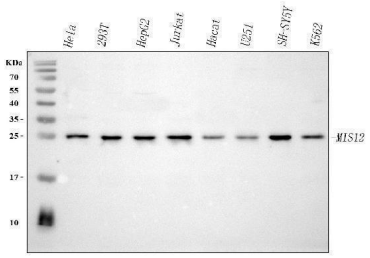
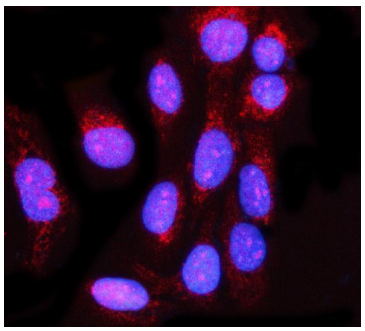
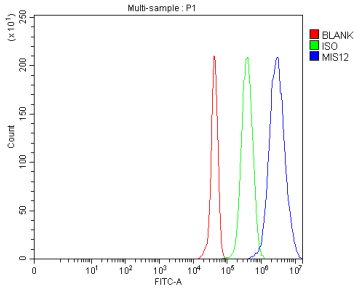
Anti-MIS12 Antibody Picoband® (A06832-1) Images



Western blot analysis of MIS12 using anti-MIS12 antibody (A06832-1). 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 293T whole cell lysates, Lane 3: human HepG2 whole cell lysates, Lane 4: human Jurkat whole cell lysates, Lane 5: human Hacat whole cell lysates, Lane 6: human U251 whole cell lysates, Lane 7: human SH-SY5Y whole cell lysates, Lane 8: human K562 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-MIS12 antigen affinity purified polyclonal antibody (Catalog # A06832-1) at 0.25 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 MIS12 at approximately 25 kDa. The expected band size for MIS12 is at 24 kDa.



IF analysis of MIS12 using anti-MIS12 antibody (A06832-1). MIS12 was detected in an immunocytochemical section of U2OS cells. 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-MIS12 Antibody (A06832-1) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 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 JK cells using anti-MIS12 antibody (A06832-1). Overlay histogram showing JK cells stained with A06832-1 (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-MIS12 Antibody (A06832-1, 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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