

Anti-MTCL1 Antibody Picoband®

Catalog Number: A10954-1

About MTCL1

MTCL1 (microtubule cross-linking factor 1), also known as CCDC165 (Coiledcoil domain-containing protein 165), SOGA2 or MTCL1, is a 1,905 amino acid protein that localizes to the cell membrane, cytoplasm and cytoskeleton. MTCL1 is a microtubule-associated factor that plays a role in regulating polarization and microtubule dynamics as well as the development and maintenance of non-centrosomal microtubule bundles. MTCL1 is encoded by a gene that maps to chromosome 18 and is expressed as four isoforms due to alternative splicing events. Chromosome 18 encodes over 300 genes and contains about 76 million bases. Trisomy 18, or Edwards syndrome, is the second most common trisomy after Downs syndrome. Symptoms of Edwards syndrome include low birth weight, a variety of physical development defects, heart deformations and breathing difficulty. Translocation between chromosome 18 and 14 is the most common translocation in cancers, and occurs in follicular lymphomas. Niemann-Pick disease, hereditary hemorrhagic telangiectasia and erythropoietic protoporphyria are associated with chromosome 18. The TGFbeta modulators, Smad2, Smad4 and Smad7 are encoded by chromosome 18.

Overview

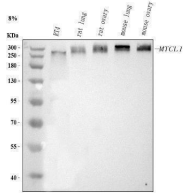
Product Name	Anti-MTCL1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-MTCL1 Antibody Picoband® catalog # A10954-1. Tested in ELISA, IHC, WB, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody 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, IHC, 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	Q9Y4B5

Technical Details

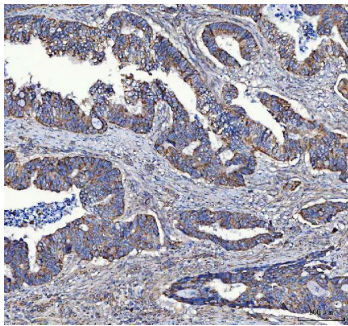
Immunogen	E.coli-derived human MTCL1 recombinant protein (Position: K884-D1522).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	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, 0.25-0.5 ug/ml, Human, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human, Mouse, Rat Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5 ug/ml, -

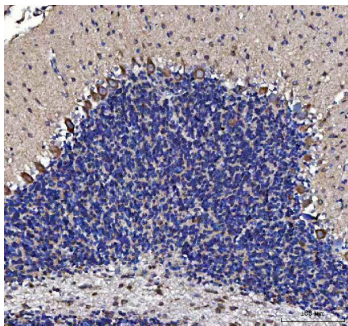
Anti-MTCL1 Antibody Picoband® (A10954-1) Images



Western blot analysis of MTCL1 using anti-MTCL1 antibody (A10954-1). 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 RT4 whole cell lysates, Lane 2: rat lung tissue lysates, Lane 3: rat ovary tissue lysates, Lane 4: mouse lung tissue lysates, Lane 5: mouse ovary tissue 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-MTCL1 antigen affinity purified polyclonal antibody (Catalog # A10954-1) 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 MTCL1 at approximately 270-300 kDa. The expected band size for MTCL1 is at 210 kDa.

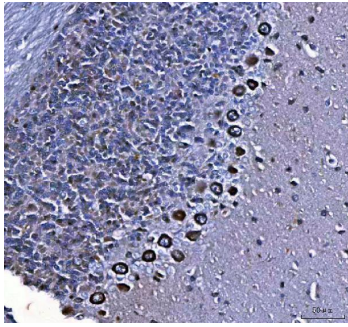


IHC analysis of MTCL1 using anti-MTCL1 antibody (A10954-1). MTCL1 was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MTCL1 Antibody (A10954-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

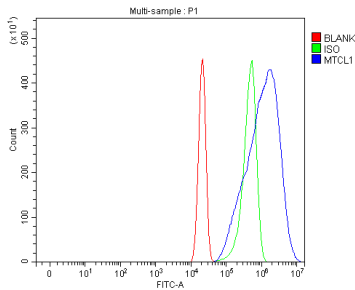


IHC analysis of MTCL1 using anti-MTCL1 antibody (A10954-1). MTCL1 was detected in a paraffin-embedded section of mouse cerebellum tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MTCL1 Antibody (A10954-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

IHC analysis of MTCL1 using anti-MTCL1 antibody (A10954-1). MTCL1 was detected in a paraffin-embedded section of rat cerebellum tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope



retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MTCL1 Antibody (A10954-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



Flow Cytometry analysis of U2OS cells using anti-MTCL1 antibody (A10954-1). Overlay histogram showing U2OS cells stained with A10954-1 (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-MTCL1 Antibody (A10954-1, 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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Anti-MTCL1 Antibody

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