

## Anti-MIEF1 Antibody Picoband®

Catalog Number: A06887-1

### About MIEF1

Mitochondrial dynamic protein MID51 (MID51) also known as mitochondrial elongation factor 1 (MIEF1) or Smith-Magenis syndrome chromosome region candidate gene 7 protein-like (SMCR7L) is a protein that in humans is encoded by the SMCR7L gene. The SMCR7L gene codes for a protein that has been called MiD51/MIEF1 and shown to regulate mitochondrial fission by interacting with the proteins Drp1 and FIS1.

### Overview

Product Name	Anti-MIEF1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-MIEF1 Antibody Picoband® catalog # A06887-1. Tested in ELISA, Flow Cytometry, IP, IF, IHC, ICC, WB 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, IP, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> .
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	Q9NQG6

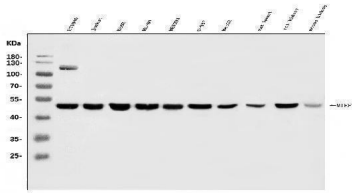
### Technical Details

Immunogen	E.coli-derived human MIEF1 recombinant protein (Position: S189-T463).
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) and 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 ug/ml.
Purification	Immunogen affinity purified.

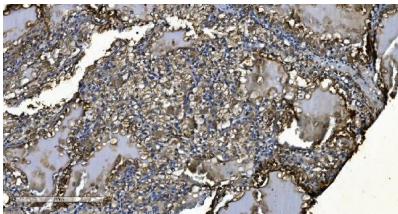
Suggested Dilutions

Western blot, 0.25-0.5ug/ml, Human, Mouse, Rat  
Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human  
Immunocytochemistry/Immunofluorescence, 5ug/ml, Human  
Immunoprecipitation, 0.5-2 ug/ml, Human  
Flow Cytometry (Fixed), 1-3ug/1x10<sup>6</sup> cells, Human  
ELISA, 0.1-0.5ug/ml, -

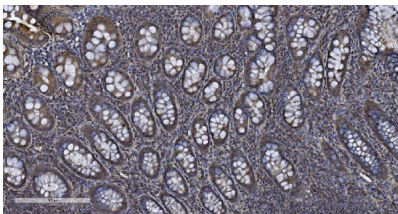
## Anti-MIEF1 Antibody Picoband® (A06887-1) Images



Western blot analysis of MIEF1 using anti-MIEF1 antibody (A06887-1). 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 30ug of sample under reducing conditions. Lane 1: human HT1080 whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human K562 whole cell lysates, Lane 4: human HL-60 whole cell lysates, Lane 5: human HEK293 whole cell lysates, Lane 6: human U-937 whole cell lysates, Lane 7: human HepG2 whole cell lysates, Lane 8: rat heart tissue lysates, Lane 9: rat kidney tissue lysates, Lane 10: mouse kidney tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-MIEF1 antigen affinity purified polyclonal antibody (Catalog # A06887-1) 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 MIEF1 at approximately 51KD. The expected band size for MIEF1 is at 51KD.

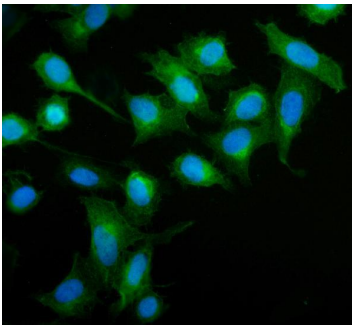


IHC analysis of MIEF1 using anti-MIEF1 antibody (A06887-1). MIEF1 was detected in paraffin-embedded section of human renal clear cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-MIEF1 Antibody (A06887-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

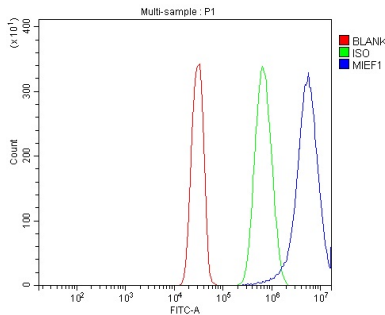


IHC analysis of MIEF1 using anti-MIEF1 antibody (A06887-1). MIEF1 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-MIEF1 Antibody (A06887-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

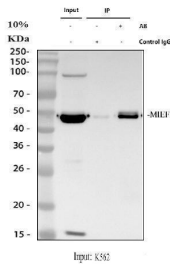
IF analysis of MIEF1 using anti-MIEF1 antibody (A06887-1). MIEF1 was detected in immunocytochemical section of U20S



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 5ug/mL rabbit anti-MIEF1 Antibody (A06887-1) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 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 SiHa cells using anti-MIEF1 antibody (A06887-1). Overlay histogram showing SiHa cells stained with A06887-1 (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-MIEF1 Antibody (A06887-1, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Immunoprecipitating (IP) MIEF1 in K562 whole cell lysate. Western blot analysis of MIEF1 using anti-MIEF1 antibody (A06887-1); Lane 1: K562 whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-MIEF1 antibody in K562 whole cell lysate; Lane 3: anti-MIEF1 antibody (2ug) + K562 whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-MIEF1 antigen affinity purified polyclonal antibody (A06887-1) at a dilution of 0.5 ug/mL and probed with a goat anti-rabbit IgG-HRP secondary antibody (Light Chain). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1196-200). A specific band was detected for MIEF1 at approximately 51 kDa. The expected band size for MIEF1 is at 51 kDa.

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### Anti-MIEF1 Antibody

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