

Anti-Thioredoxin 2/TXN2 Antibody Picoband® (monoclonal, 7B5)

Catalog Number: M04586-1

About TXN2

Thioredoxin, mitochondrial also known as thioredoxin-2 is a protein that in humans is encoded by the TXN2 gene on chromosome 22. It is mapped to 22q12.3. This nuclear gene encodes a mitochondrial member of the thioredoxin family, a group of small multifunctional redox-active proteins. The encoded protein may play important roles in the regulation of the mitochondrial membrane potential and in protection against oxidant-induced apoptosis.

Overview

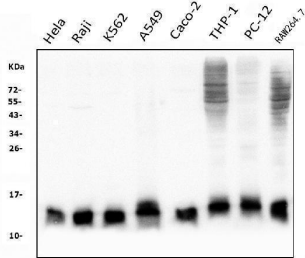
Product Name	Anti-Thioredoxin 2/TXN2 Antibody Picoband® (monoclonal, 7B5)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Thioredoxin 2/TXN2 Antibody Picoband® (monoclonal, 7B5) catalog # M04586-1. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, 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	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Monoclonal 7B5
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	Mouse
Uniprot ID	Q99757

Technical Details

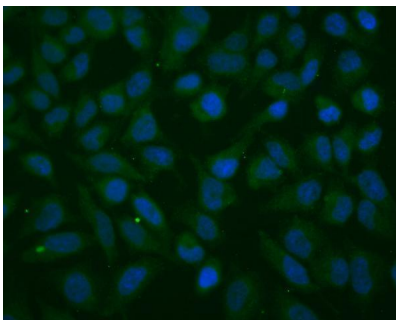
Immunogen	E.coli-derived human Thioredoxin 2/TXN2 recombinant protein (Position: T60-G166).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
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, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10 ⁶ cells, Human

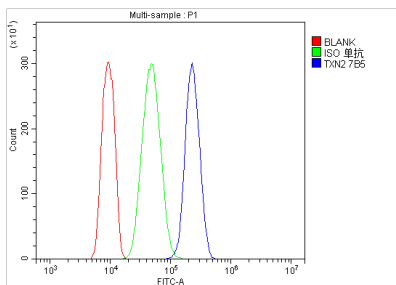
Anti-Thioredoxin 2/TXN2 Antibody Picoband® (monoclonal, 7B5) (M04586-1) Images



Western blot analysis of Thioredoxin 2/TXN2 using anti-Thioredoxin 2/TXN2 antibody (M04586-1). 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 50ug of sample under reducing conditions. Lane 1: human HeLa whole cell lysates; Lane 2: human Raji whole cell lysates; Lane 3: human K562 whole cell lysates; Lane 4: human A549 whole cell lysates; Lane 5: human Caco-2 whole cell lysates; Lane 6: human THP-1 whole cell lysates; Lane 7: rat PC-12 whole cell lysates; Lane 8: mouse RAW264.7 whole cell 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 mouse anti-Thioredoxin 2/TXN2 antigen affinity purified monoclonal antibody (Catalog # M04586-1) 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-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for CTNNA1 at approximately 14KD. The expected band size for CTNNA1 is at 14KD.

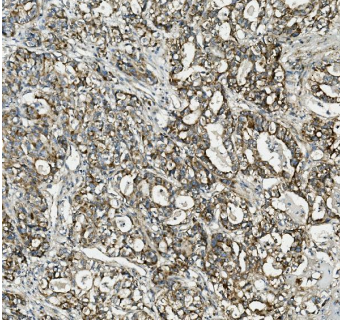


IF analysis of Thioredoxin 2/TXN2 using anti-Thioredoxin 2/TXN2 antibody (M04586-1). Thioredoxin 2/TXN2 was detected in immunocytochemical section of HeLa cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL mouse anti-Thioredoxin 2/TXN2 Antibody (M04586-1) overnight at 4°C. DyLight®488 Conjugated Goat Anti-mouse IgG (BA1126) 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.

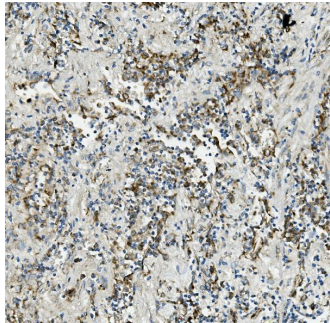


Flow Cytometry analysis of HL-60 cells using anti-Thioredoxin 2/TXN2 antibody (M04586-1). Overlay histogram showing HL-60 cells stained with M04586-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Thioredoxin 2/TXN2 Antibody (M04586-1, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank

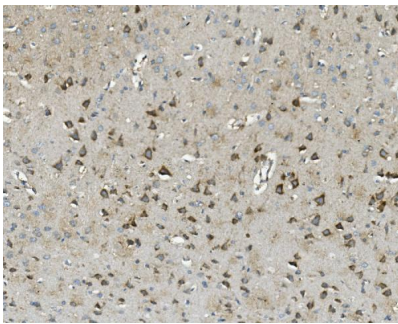
control.



IHC analysis of Thioredoxin 2/TXN2 using anti-Thioredoxin 2/TXN2 antibody (M04586-1). Thioredoxin 2/TXN2 was detected in paraffin-embedded section of human gastric 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 1ug/ml mouse anti-Thioredoxin 2/TXN2 Antibody (M04586-1) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.



IHC analysis of Thioredoxin 2/TXN2 using anti-Thioredoxin 2/TXN2 antibody (M04586-1). Thioredoxin 2/TXN2 was detected in paraffin-embedded section of human lung 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 1ug/ml mouse anti-Thioredoxin 2/TXN2 Antibody (M04586-1) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.



IHC analysis of Thioredoxin 2/TXN2 using anti-Thioredoxin 2/TXN2 antibody (M04586-1). Thioredoxin 2/TXN2 was detected in paraffin-embedded section of rat brain 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 1ug/ml mouse anti-Thioredoxin 2/TXN2 Antibody (M04586-1) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.

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