

Anti-Thioredoxin 2/TXN2 Antibody Picoband® (monoclonal, 4H3)

Catalog Number: M04586-2

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

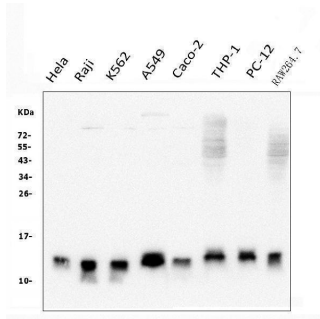
Product Name	Anti-Thioredoxin 2/TXN2 Antibody Picoband® (monoclonal, 4H3)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Thioredoxin 2/TXN2 Antibody Picoband® (monoclonal, 4H3) catalog # M04586-2. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, 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 4H3
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
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

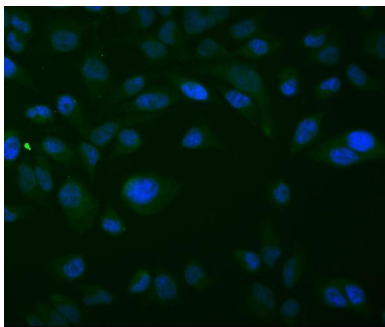
Immunogen	E.coli-derived human Thioredoxin 2/TXN2 recombinant protein (Position: T60-G166).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2a
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 Immunofluorescence, 2ug/ml, Human Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10 ⁶ cells, Human

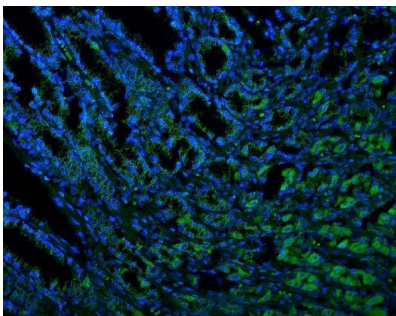
Anti-Thioredoxin 2/TXN2 Antibody Picoband® (monoclonal, 4H3) (M04586-2) Images



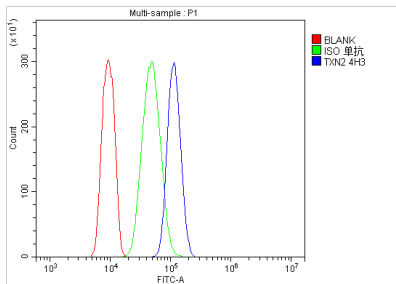
Western blot analysis of Thioredoxin 2/TXN2 using anti-Thioredoxin 2/TXN2 antibody (M04586-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: 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 # M04586-2) 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.



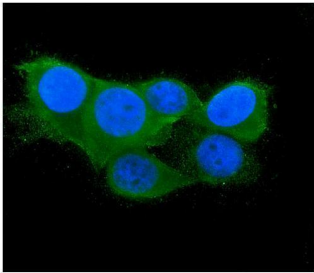
IF analysis of Thioredoxin 2/TXN2 using anti-Thioredoxin 2/TXN2 antibody (M04586-2). Thioredoxin 2/TXN2 was detected in immunocytochemical section of Hela cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL mouse anti-Thioredoxin 2/TXN2 Antibody (M04586-2) 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.



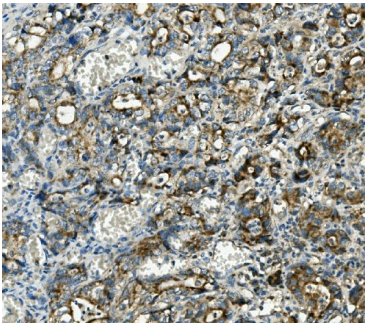
IF analysis of Thioredoxin 2/TXN2 using anti-Thioredoxin 2/TXN2 antibody (M04586-2). Thioredoxin 2/TXN2 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/mL mouse anti-Thioredoxin 2/TXN2 Antibody (M04586-2) 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.



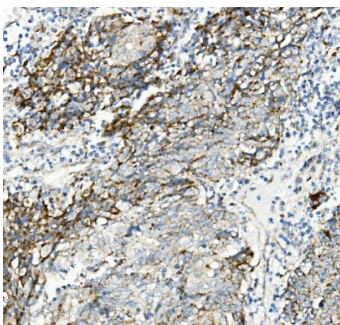
Flow Cytometry analysis of HL-60 cells using anti-Thioredoxin 2/TXN2 antibody (M04586-2). Overlay histogram showing HL-60 cells stained with M04586-2 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells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



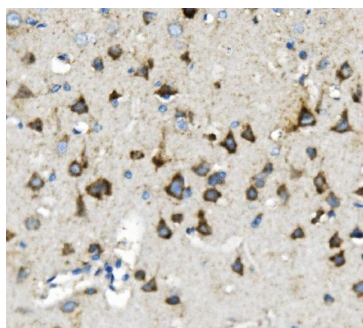
IF analysis of Thioredoxin 2/TXN2 using anti-Thioredoxin 2/TXN2 antibody (M04586-2). Thioredoxin 2/TXN2 was detected in immunocytochemical section of MCF7 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2 μ g/mL mouse anti-Thioredoxin 2/TXN2 Antibody (M04586-2) 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.



IHC analysis of Thioredoxin 2/TXN2 using anti-Thioredoxin 2/TXN2 antibody (M04586-2). 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 1 μ g/ml mouse anti-Thioredoxin 2/TXN2 Antibody (M04586-2) 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 (M04586-2). 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 1 μ g/ml mouse anti-Thioredoxin 2/TXN2 Antibody (M04586-2) 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 (M04586-2). 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 (M04586-2) 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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