BOSTER BIOLOGICAL TECHNOLOGY
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Anti-GRX2/GLRX2 Antibody Picoband®

Catalog Number: A05331

About GLRX2

GLRX2 (Glutaredoxin-2) also known as Glutaredoxin-2, mitochondrial or GRX2, is a protein that in humans is encoded by the GLRX2 gene. Glutaredoxins (e.g., GLRX) are a family of glutathione-dependent hydrogen donors that participate in a variety of cellular redox reactions. By sequence analysis, Lundberg et al. (2001) and Gladyshev et al. (2001) identified the GLRX2 gene within a clone mapping to chromosome 1q31.2-q31.3. Lundberg et al. (2001) determined that the GLRX2 gene contains 5 exons spanning about 9.6 kb. The GLRX2B transcript uses a first exon (exon 1B) located upstream from the first exon used by the GLRX2A transcript (exon 1A), suggesting that alternative splicing generates the isoforms. Lundberg et al. (2001)assayed reductase activity in recombinant proteins of both GLRX2 isoforms. They found that both have GSH-dependent dehydroascorbate reductase activity and 2-hydroxyethyl disulfide reductase activity.

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Overview

Product Name	Anti-GRX2/GLRX2 Antibody Picoband®
Reactive Species	Human, Mouse
Description	Boster Bio Anti-GRX2/GLRX2 Antibody Picoband® catalog # A05331. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse. 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, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
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	Q9NS18

Technical Details

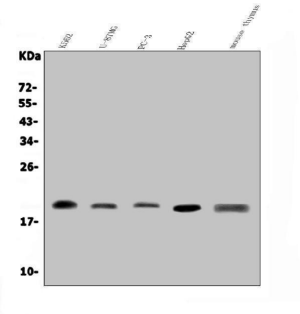
Immunogen	E.coli-derived human GRX2/GLRX2 recombinant protein (Position: M1-Q164).

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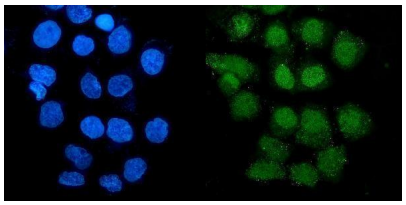
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
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 Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/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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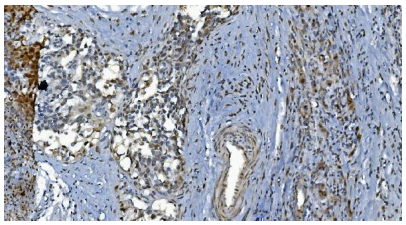
Anti-GRX2/GLRX2 Antibody Picoband® (A05331) Images



Western blot analysis of GRX2/GLRX2 using anti-GRX2/GLRX2 antibody (A05331). 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 K562 whole cell lysates, Lane 2: human U-87MG whole cell lysates, Lane 3: human PC-3 whole cell lysates, Lane 4: human HepG2 whole cell lysates, Lane 5: mouse thymus 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-GRX2/GLRX2 antigen affinity purified polyclonal antibody (Catalog # A05331) 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 GRX2/GLRX2 at approximately 18KD. The expected band size for GRX2/GLRX2 is at 18KD.



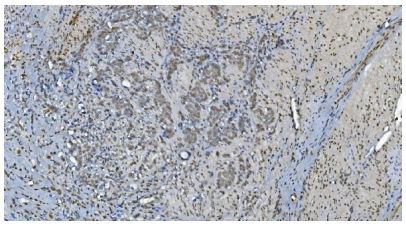
IF analysis of GRX2/GLRX2 using anti-GRX2/GLRX2 antibody (A05331). GRX2/GLRX2 was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-GRX2/GLRX2 Antibody (A05331) 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.



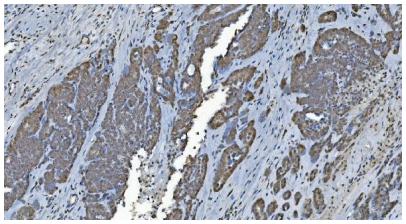
IHC analysis of GRX2/GLRX2 using anti-GRX2/GLRX2 antibody (A05331). GRX2/GLRX2 was detected in paraffin-embedded section of human bladder cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-GRX2/GLRX2 Antibody (A05331) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

IHC analysis of GRX2/GLRX2 using anti-GRX2/GLRX2 antibody (A05331). GRX2/GLRX2 was detected in paraffin-

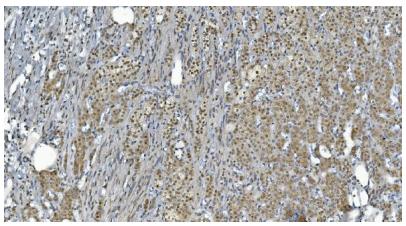
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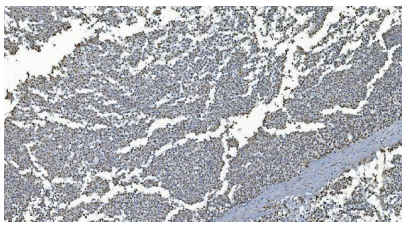
embedded section of human gastric cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-GRX2/GLRX2 Antibody (A05331) overnight at 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



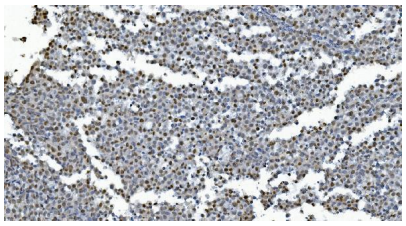
IHC analysis of GRX2/GLRX2 using anti-GRX2/GLRX2 antibody (A05331). GRX2/GLRX2 was detected in paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-GRX2/GLRX2 Antibody (A05331) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of GRX2/GLRX2 using anti-GRX2/GLRX2 antibody (A05331). GRX2/GLRX2 was detected in paraffin-embedded section of human renal 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-GRX2/GLRX2 Antibody (A05331) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



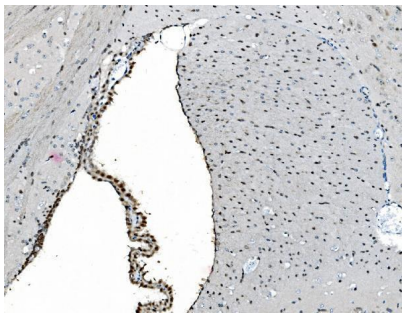
IHC analysis of GRX2/GLRX2 using anti-GRX2/GLRX2 antibody (A05331). GRX2/GLRX2 was detected in paraffin-embedded section of human testicular cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-GRX2/GLRX2 Antibody (A05331) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



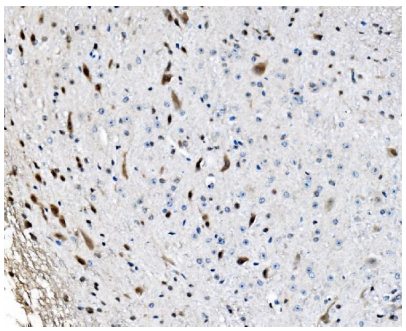
IHC analysis of GRX2/GLRX2 using anti-GRX2/GLRX2 antibody (A05331). GRX2/GLRX2 was detected in paraffin-embedded section of human testicular cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was

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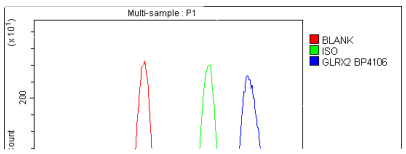
blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-GRX2/GLRX2 Antibody (A05331) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of GRX2/GLRX2 using anti-GRX2/GLRX2 antibody (A05331). GRX2/GLRX2 was detected in paraffin-embedded section of mouse 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 2ug/ml rabbit anti-GRX2/GLRX2 Antibody (A05331) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of GRX2/GLRX2 using anti-GRX2/GLRX2 antibody (A05331). GRX2/GLRX2 was detected in paraffin-embedded section of mouse 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 2ug/ml rabbit anti-GRX2/GLRX2 Antibody (A05331) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



Flow Cytometry analysis of CACO-2 cells using anti-GRX2/GLRX2 antibody (A05331). Overlay histogram showing CACO-2 cells stained with A05331 (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-GRX2/GLRX2 Antibody (A05331, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit 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.

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