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Anti-Hexokinase 1/HK1 Antibody Picoband® (monoclonal, 4B7)

Catalog Number: M01504-2

About HK1

Hexokinase-1 (HK1) is an enzyme that in humans is encoded by the HK1 gene on chromosome 10. It is mapped to 10q22.1. Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. This gene encodes a ubiquitous form of hexokinase which localizes to the outer membrane of mitochondria. Mutations in this gene have been associated with hemolytic anemia due to hexokinase deficiency. Alternative splicing of this gene results in several transcript variants which encode different isoforms, some of which are tissue-specific.

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Overview

Product Name	Anti-Hexokinase 1/HK1 Antibody Picoband® (monoclonal, 4B7)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Hexokinase 1/HK1 Antibody Picoband® (monoclonal, 4B7) catalog # M01504-2. Tested in Flow Cytometry, IF, IHC, IHC-F, 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, IHC-F, ICC, WB
Clonality	Monoclonal 4B7
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	P19367

Technical Details

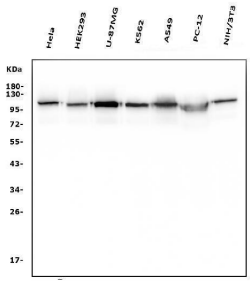
Immunogen	E.coli-derived human Hexokinase 1/HK1 recombinant protein (Position: D17-R323).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western

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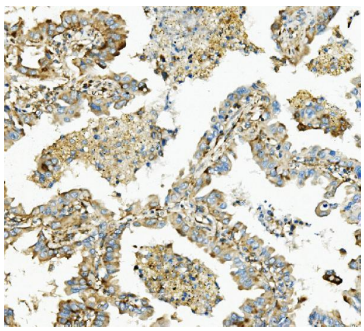
	blot, and HRP Conjugated anti- Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2a
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen 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 Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human Immunofluorescence, 2ug/ml, Human Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human 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-Hexokinase 1/HK1 Antibody Picoband® (monoclonal, 4B7) (M01504-2) Images



Western blot analysis of Hexokinase 1/HK1 using anti-Hexokinase 1/HK1 antibody (M01504-2). 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 HEK293 whole cell lysates; Lane 3: human U-87MG whole cell lysates; Lane 4: human K562 whole cell lysates; Lane 5: human A549 whole cell lysates; Lane 6: rat PC-12 whole cell lysates; Lane 7: mouse NIH/3T3 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-Hexokinase 1/HK1 antigen affinity purified monoclonal antibody (Catalog # M01504-2) 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 Hexokinase 1/HK1 at approximately 120KD. The expected band size for Hexokinase 1/HK1 is at 120KD.

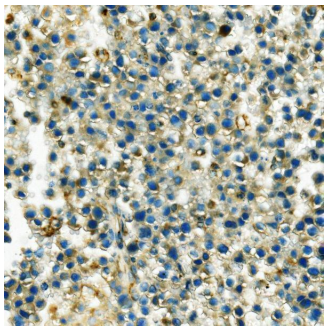


IHC analysis of Hexokinase 1/HK1 using anti-Hexokinase 1/HK1 antibody (M01504-2). Hexokinase 1/HK1 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-Hexokinase 1/HK1 Antibody (M01504-2) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

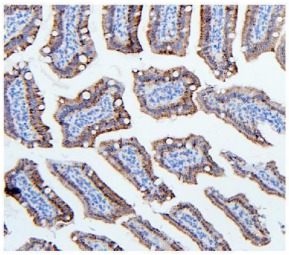


IHC analysis of Hexokinase 1/HK1 using anti-Hexokinase 1/HK1 antibody (M01504-2). Hexokinase 1/HK1 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-Hexokinase 1/HK1 Antibody (M01504-2) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

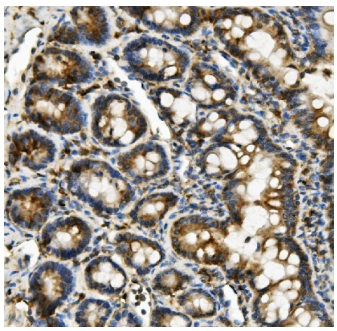
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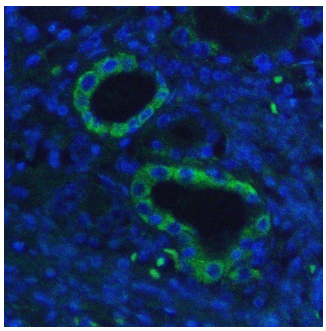
IHC analysis of Hexokinase 1/HK1 using anti-Hexokinase 1/HK1 antibody (M01504-2). Hexokinase 1/HK1 was detected in paraffin-embedded section of human testis cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-Hexokinase 1/HK1 Antibody (M01504-2) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.



IHC analysis of Hexokinase 1/HK1 using anti-Hexokinase 1/HK1 antibody (M01504-2). Hexokinase 1/HK1 was detected in paraffin-embedded section of mouse intestine 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-Hexokinase 1/HK1 Antibody (M01504-2) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.



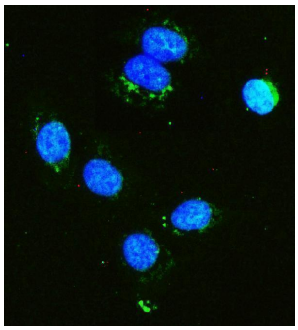
IHC analysis of Hexokinase 1/HK1 using anti-Hexokinase 1/HK1 antibody (M01504-2). Hexokinase 1/HK1 was detected in paraffin-embedded section of rat intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-Hexokinase 1/HK1 Antibody (M01504-2) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.



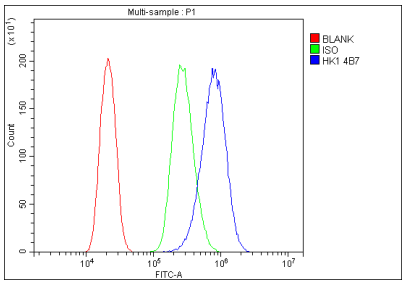
IF analysis of Hexokinase 1/HK1 using anti-Hexokinase 1/HK1 antibody (M01504-2). Hexokinase 1/HK1 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/mL mouse anti-Hexokinase 1/HK1 Antibody (M01504-2) 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 Hexokinase 1/HK1 using anti-Hexokinase 1/HK1 antibody (M01504-2). Hexokinase 1/HK1 was detected

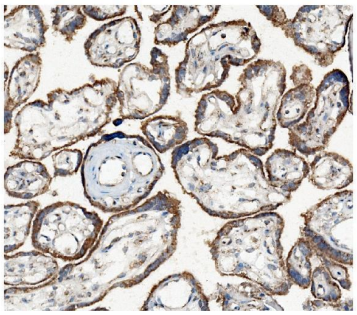
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in immunocytochemical section of U20S cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL mouse anti-Hexokinase 1/HK1 Antibody (M01504-2) 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 PC-3 cells using anti- Hexokinase 1/HK1 antibody (M01504-2). Overlay histogram showing PC-3 cells stained with M01504-2 (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- Hexokinase 1/HK1 Antibody (M01504-2, 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 Hexokinase 1/HK1 using anti-Hexokinase 1/HK1 antibody (M01504-2). Hexokinase 1/HK1 was detected in a frozen section of human placenta tissue. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-Hexokinase 1/HK1 Antibody (M01504-2) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

Anti-Hexokinase 1/HK1 Antibody (monoclonal, 4B7)

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