

Anti-Nkx2.5/NKX2-5 Antibody Picoband®

Catalog Number: A00738-2

About NKX2-5

Homeobox protein Nkx-2.5, also known as NKX2E or CSX is a protein that in humans is encoded by the NKX2-5 gene. It is mapped to 5q35.1. Homeobox-containing genes play critical roles in regulating tissue-specific gene expression essential for tissue differentiation, as well as determining the temporal and spatial patterns of development. Nkx2.5 and Tbx5 directly bound to the promoter of the gene encoding cardiac-specific natriuretic peptide precursor type A (NPPA) in tandem, and both transcription factors showed synergistic activation. The cardiac homeobox protein Nkx2.5 is essential in cardiac development, and mutations in CSX (which encodes Nkx2.5) cause various congenital heart malformations.

Overview

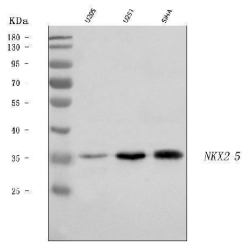
Product Name	Anti-Nkx2.5/NKX2-5 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-Nkx2.5/NKX2-5 Antibody Picoband® catalog # A00738-2. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody 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 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	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 freezing and thawing.
Host	Rabbit
Uniprot ID	P52952

Technical Details

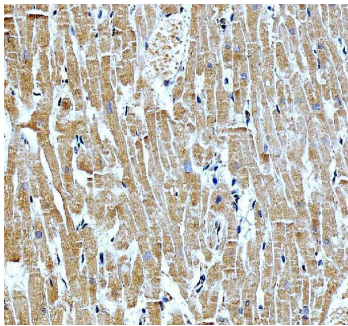
Immunogen	E.coli-derived human Nkx2.5/NKX2-5 recombinant protein (Position: K15-R132).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for ICC.
Cross Reactivity	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, 0.25-0.5 ug/ml, Human Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5 ug/ml, -

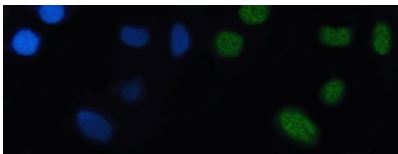
Anti-Nkx2.5/NKX2-5 Antibody Picoband® (A00738-2) Images



Western blot analysis of Nkx2.5/NKX2-5 using anti-Nkx2.5/NKX2-5 antibody (A00738-2). 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 30 ug of sample under reducing conditions. Lane 1: human U2OS whole cell lysates, Lane 2: human U251 whole cell lysates, Lane 3: human SiHa whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-Nkx2.5/NKX2-5 antigen affinity purified polyclonal antibody (Catalog # A00738-2) 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-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 Nkx2.5/NKX2-5 at approximately 35 kDa. The expected band size for Nkx2.5/NKX2-5 is at 35 kDa.

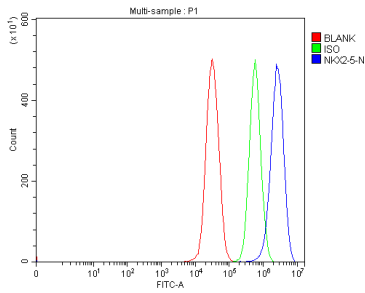


IHC analysis of NKX2-5 using anti-NKX2-5 antibody (A00738-2). NKX2-5 was detected in a paraffin-embedded section of human heart tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-NKX2-5 Antibody (A00738-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IF analysis of Nkx2.5/NKX2-5 using anti-Nkx2.5/NKX2-5 antibody (A00738-2). Nkx2.5/NKX2-5 was detected in an immunocytochemical section of SiHa 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 5 ug/mL rabbit anti-Nkx2.5/NKX2-5 Antibody (A00738-2) 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 293T cells using anti-Nkx2.5/NKX2-5 antibody (A00738-2). Overlay histogram showing 293T cells stained with A00738-2 (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 rabbit anti-Nkx2.5/NKX2-5 Antibody (A00738-2, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/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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Anti-Nkx2.5/NKX2-5 Antibody

For Research Use Only. Not for use in diagnostic procedures.