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Mouse Nkx2-5 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21222C

Product Information

Application	IHC-P-Leica, IF, WB, FC, E
Primary Accession	P42582
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB52360
Calculated MW	34163

Additional Information

Gene ID	18091
Other Names	Homeobox protein Nkx-25, Cardiac-specific homeobox, Homeobox protein CSX, Homeobox protein NK-2 homolog E, Nkx2-5, Csx, Nkx-25, Nkx2e
Target/Specificity	This mouse Nkx2-5 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 98-133 amino acids from the Central region of mouse Nkx2-5.
Dilution	IHC-P-Leica~~1:500 IF~~1:25 WB~~1:2000 FC~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Nkx2-5 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Nkx2-5
Synonyms	Csx, Nkx-2.5, Nkx2e
Function	Transcription factor required for the development of the heart and the spleen (PubMed:16556915, PubMed:19483677, PubMed:22560297,

PubMed:9584153). During heart development, acts as a transcriptional activator of NPPA/ANF in cooperation with GATA4 (PubMed:9584153). May cooperate with TBX2 to negatively modulate expression of NPPA/ANF in the atrioventricular canal (PubMed:12023302). Binds to the core DNA motif of NPPA promoter (PubMed:19483677). Together with PBX1, required for spleen development through a mechanism that involves CDKN2B repression (PubMed:22560297). Positively regulates transcription of genes such as COL3A1 and MMP2, resulting in increased pulmonary endothelial fibrosis in response to hypoxia (By similarity).

Cellular Location Nucleus.

Tissue Location Predominantly in the adult and embryonic heart, and to a lesser extent in lingual muscle, spleen and stomach

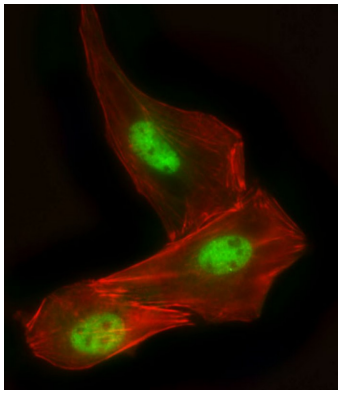
Background

Implicated in commitment to and/or differentiation of the myocardial lineage. Acts as a transcriptional activator of ANF in cooperation with GATA4. It is transcriptionally controlled by PBX1 and acts as a transcriptional repressor of CDKN2B. Together with PBX1, it is required for spleen development through a mechanism that involves CDKN2B repression.

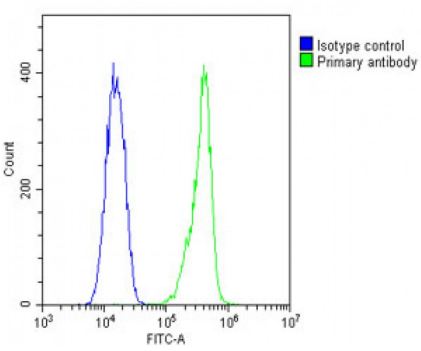
References

Lints T.J.,et al.Development 119:419-431(1993).
Lints T.J.,et al.Development 119:969-969(1993).
Searcy R.D.,et al.Development 125:4461-4470(1998).
Komuro I.,et al.Proc. Natl. Acad. Sci. U.S.A. 90:8145-8149(1993).
Kim Y.H.,et al.J. Biol. Chem. 273:25875-25879(1998).

Images

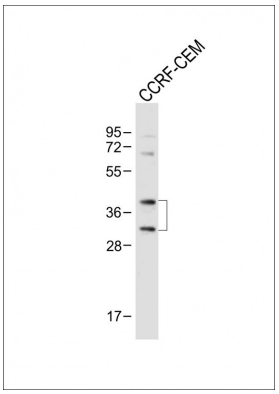


Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0. 1% Triton X-100 permeabilized C2C12 cells labeling Nkx2-5 with AP21222c at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-Rabbit IgG secondary antibody at 1/200 dilution (green). Immunofluorescence image showing Nucleus staining on C2C12 cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin(red). The nuclear counter stain is DAPI (blue).



Overlay histogram showing C2C12 cells stained with AP21222c(green line). The cells were fixed with 2% paraformaldehyde and then permeabilized with 90% methanol for 10 min. The cells were then incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed at 1/200 dilution for 40 min at Room temperature. Isotype control antibody (blue line)

was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



Anti-Mouse Nkx2-5 Antibody (Center) at 1:1000 dilution + CCRF-CEM whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 30-42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.