10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

NKX2-2 Antibody

Catalog # ASC11446

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	O95096
Other Accession	NP_002500, 4505401
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	30133
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	NKX2-2 antibody can be used for detection of NKX2-2 by Western blot at 1 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	4821
Other Names	Homeobox protein Nkx-2.2, Homeobox protein NK-2 homolog B, NKX2-2, NKX2.2, NKX2B
Target/Specificity	NKX2-2; NKX2-2 antibody is predicted to not cross-react with other NK2 homeobox family members.
Reconstitution & Storage	NKX2-2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	NKX2-2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NKX2-2
Synonyms	NKX2.2, NKX2B
Function	Transcriptional activator involved in the development of insulin-producting beta cells in the endocrine pancreas (By similarity). May also be involved in specifying diencephalic neuromeric boundaries, and in controlling the expression of genes that play a role in axonal guidance. Binds to elements within the NEUROD1 promoter (By similarity).

Cellular Location Nucleus {ECO:0000255|PROSITE-ProRule:PRU00108}.

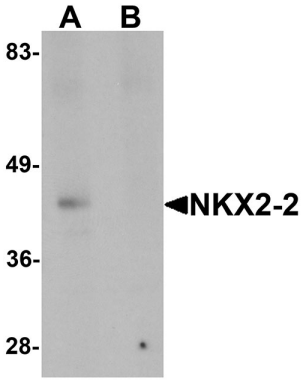
Background

NKX2-2 Antibody: NKX2-2 (NK2 homeobox 2) is a member of a family of transcription factors that are involved in embryonic development and cell fate. NKX2-2 is crucial in the development of pancreatic islet cell differentiation and activates the ghrelin-promoter in these cells. NKX2-2 is expressed at the onset of pancreatic epithelium formation and becomes restricted to mature α-, β- and PP cells, and in NKX2-2-null mice embryos, all β-cells and most a-cells are replaced by ghrelin-positive cells. NKX2-2 is also thought to be involved in ventral neuronal patterning and floor plate development and commissural axon guidance.

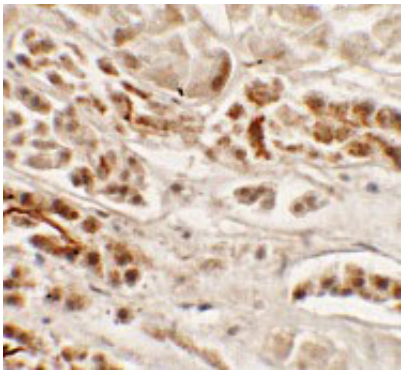
References

Sussel L, Kalamaras J, Hartigan-O'Connor DJ, et al. Mice lacking the homeodomain transcription factor Nkx2.2 have diabetes due to arrested differentiation of pancreatic beta cells. Development 1998; 125:2213-21
Prado CL, Pugh-Bernard AE, Elghazi L, et al. Ghrelin cells replace insulin-producing beta cells in two mouse models of pancreas development. Proc. Natl. Acad. Sci. 2004; 101:2924-9.
Hill JT, Chao CS, Anderson KR, et al. Nkx2.2 activates the ghrelin promoter in pancreatic islet cells. Mol. Endocrinol. 2010; 381-90.
Briscoe J, Sussel L, Serup P, et al. Homeobox gene Nkx2.2 and specification of neuronal identity by graded Sonic hedgehog signaling. Nature 1999; 398:622-7.

Images

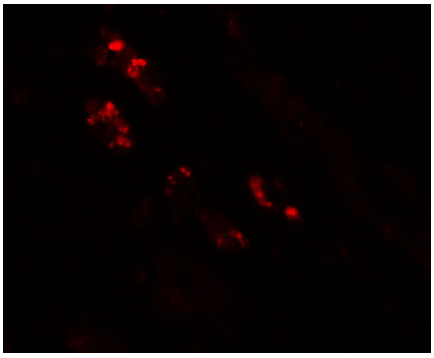


Western blot analysis of NKX2-2 in rat kidney tissue lysate with NKX2-2 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of NKX2-2 in human kidney tissue with NKX2-2 antibody at 2.5 µg/mL.

Immunofluorescence of NKX2-2 in human kidney tissue with NKX2-2 antibody at 20 µg/mL.



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