

Store at
-20C
#54551**NKX6.1 (D8O4R) Rabbit mAb**

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Applications: W, IP, IHC-P, IF-IC, FC-FP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 44, 46	Source/Isotype: Rabbit IgG	UniProt ID: #P78426	Entrez-Gene Id: 4825
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation
Immunohistochemistry (Paraffin)
Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:50
1:3200
1:400
1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #99540.

Specificity/Sensitivity

NKX6.1 (D8O4R) Rabbit mAb recognizes endogenous levels of total NKX6.1 protein. Note: Some non-specific staining of squamous epithelium has been observed by IHC. It is unclear if the antibody works on human samples in western blotting but is predicted to based on 100% sequence homology.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu72 of human NKX6.1 protein.

Background

The homeodomain protein NKX6.1 is a transcription factor that regulates pancreatic β-cell development (1). Overexpressed NKX6.1 stimulates rat pancreatic β-cell proliferation and increases glucose-stimulated insulin secretion (GSIS) (2). The effect on GSIS was shown to be mediated by the up-regulation of prohormone VGF expression and the subsequent potentiation by TLQP-21, a peptide derived from VGF (3). Both nuclear receptors Nr4a1 and Nr4a3 are essential for pancreatic β-cell proliferation driven by overexpressed NKX6.1 (4). In addition, studies suggest that NKX6.1 is a suppressor for epithelial-to-mesenchymal transition (EMT), leading to inhibition of tumor metastasis (5).

Background References

1. Habener, J.F. et al. (2005) *Endocrinology* 146, 1025-34.
2. Schisler, J.C. et al. (2008) *Mol Cell Biol* 28, 3465-76.
3. Stephens, S.B. et al. (2012) *Cell Metab* 16, 33-43.
4. Tessem, J.S. et al. (2014) *Proc Natl Acad Sci U S A* 111, 5242-7.
5. Li, H.J. et al. (2015) *Oncogene*, 2266-78.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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