

## Pax-4 (C-20): sc-27833

### BACKGROUND

Pax-4 (paired box gene 4) protein influences normal differentiation of Insulin-producing beta cells and influences normal pancreatic islet development. Pax-4 protein is a transcriptional repressor that binds to a common *cis* element in the glucagon, Insulin and somatostatin promoters. Mouse Pax-4 transcript is present in pancreatic islets, and the islet  $\beta$  cell lines MIN6,  $\beta$  TC and NIT-1. Differentiation of endoderm-derived endocrine pancreas is mediated through Pax-4 and Pax-6. Pax-4 may act as a Pax-6 repressor due to the competition for binding sites and lower transactivation potential of Pax-4. The human Pax-4 gene encodes a deduced 350-amino acid protein that is 80% identical to the deduced mouse Pax-4 protein.

### REFERENCES

1. Matsushita, T., et al. 1998. Molecular cloning of mouse paired-box-containing gene (Pax)-4 from an islet beta cell line and deduced sequence of human Pax-4. *Biochem. Biophys. Res. Commun.* 242: 176-180.
2. Larsson, L.I., et al. 1998. Pax-4 and -6 regulate gastrointestinal endocrine cell development. *Mech. Dev.* 79: 153-159.
3. Kalousova, A., et al. 1999. DNA binding and transactivating properties of the paired and homeobox protein Pax-4. *Biochem. Biophys. Res. Commun.* 259: 510-518.
4. Ritz-Laser, B., et al. 2002. The pancreatic beta-cell-specific transcription factor Pax-4 inhibits glucagon gene expression through Pax-6. *Diabetologia* 45: 97-107.
5. Kemp, D.M., et al. 2003. Regulation of Pax-4 paired homeodomain gene by neuron-restrictive silencer factor. *J. Biol. Chem.* 278: 35057-35062.
6. LocusLink Report (LocusID: 5078). <http://www.ncbi.nlm.nih.gov/LocusLink/>

### CHROMOSOMAL LOCATION

Genetic locus: PAX4 (human) mapping to 7q32.1

### SOURCE

Pax-4 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Pax-4 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-27833 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-27833 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### APPLICATIONS

Pax-4 (C-20) is recommended for detection of Pax-4 isoform Pax-4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Pax-4 siRNA (h): sc-43998, Pax-4 shRNA Plasmid (h): sc-43998-SH and Pax-4 shRNA (h) Lentiviral Particles: sc-43998-V.

Pax-4 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Pax-4: 38 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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