

Pax-4 (S-15): sc-27832

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 Pax4. *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 Pax4 paired homeodomain gene by neuron-restrictive silencer factor. *J. Biol. Chem.* 278: 35057-35062.

CHROMOSOMAL LOCATION

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

SOURCE

Pax-4 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Pax-4 of human origin.

PRODUCT

Each vial contains 200 µg 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-27832 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-27832 P, (100 µg 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Pax-4 (S-15) is recommended for detection of Pax-4 isoform Pax-4V of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 (S-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

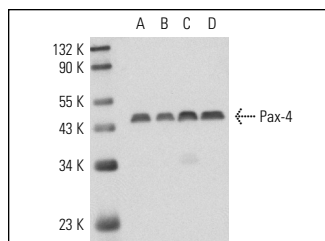
Molecular Weight of Pax-4: 38 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, SW480 nuclear extract: sc-2155 or K-562 nuclear extract: sc-2130.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Pax-4 (S-15): sc-27832. Western blot analysis of Pax-4 expression in HeLa (A), A-673 (B), SW480 (C) and K-562 (D) nuclear extracts.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **Pax (D-7): sc-514352**, our highly recommended monoclonal alternative to Pax-4 (S-15). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Pax (D-7): sc-514352**.