

Product datasheet

Anti-PAX4 antibody ab42450

[4 References](#) [3 Images](#)

Overview

Product name	Anti-PAX4 antibody
Description	Rabbit polyclonal to PAX4
Host species	Rabbit
Tested applications	Suitable for: IHC-P, ELISA, WB
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Dog 
Immunogen	Synthetic peptide: RTIFPSQAE ALEKEFQRGQ YPDSVARGKL ATATSLPEDT VRVWFSNRRA , corresponding to Internal sequence amino acids 184-233 of Human PAX4 Run BLAST with Expasy Run BLAST with NCBI
Positive control	Jurkat cell lysate; Human intestinal tissue; Human kidney tissue

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: 2% Sucrose, PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab42450 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration.
ELISA		1/312500.

Application	Abreviews	Notes
WB		Use a concentration of 0.5 - 2 µg/ml. Detects a band of approximately 42 kDa (predicted molecular weight: 37 kDa). Good results were obtained when blocked with 5% non-fat dry milk in 0.05% PBS-T.

Target

Function

Plays an important role in the differentiation and development of pancreatic islet beta cells. Transcriptional repressor that binds to a common element in the glucagon, insulin and somatostatin promoters. Competes with PAX6 for this same promoter binding site. Isoform 2 appears to be a dominant negative form antagonizing PAX4 transcriptional activity.

Involvement in disease

Defects in PAX4 are a cause of noninsulin-dependent diabetes mellitus (NIDDM) [MIM:125853]; also known as diabetes mellitus type 2 or maturity-onset diabetes. NIDDM is characterized by an autosomal dominant mode of inheritance, onset during adulthood and insulin resistance. Genetic variations in PAX4 are associated with susceptibility to insulin-dependent diabetes mellitus (IDDM) [MIM:222100]. IDDM normally starts in childhood or adolescence and is caused by the body's own immune system which destroys the insulin-producing beta cells in the pancreas. Classical features are polydipsia, polyphagia and polyuria, due to hyperglycemia-induced osmotic diuresis.

Defects in PAX4 are a cause of susceptibility to diabetes mellitus ketosis-prone (KPD) [MIM:612227]. KPD is an atypical form of diabetes mellitus characterized by an acute initial presentation with severe hyperglycemia and ketosis, as seen in classic type 1 diabetes, but after initiation of insulin therapy, prolonged remission is often possible with cessation of insulin therapy and maintenance of appropriate metabolic control. Metabolic studies show a markedly blunted insulin secretory response to glucose, partially reversible with the improvement of blood glucose control. Variable levels of insulin resistance are observed, especially in obese patients. Pancreatic beta-cell autoimmunity is a rare finding.

Defects in PAX4 are the cause of maturity-onset diabetes of the young type 9 (MODY9) [MIM:612225]. MODY is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease.

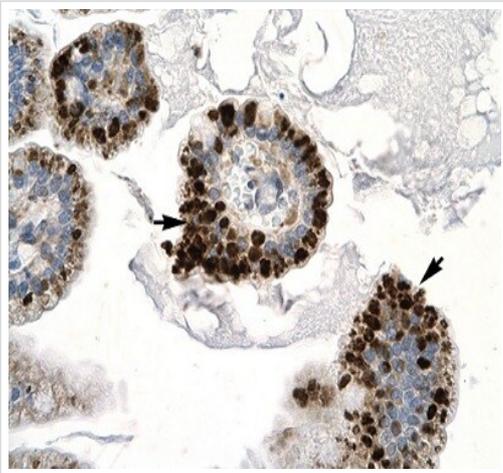
Sequence similarities

Belongs to the paired homeobox family.
Contains 1 homeobox DNA-binding domain.
Contains 1 paired domain.

Cellular localization

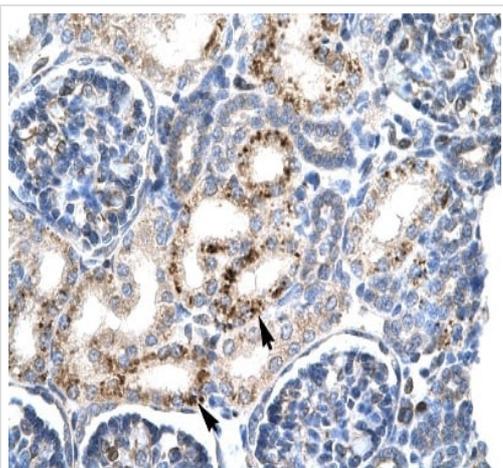
Nucleus.

Images



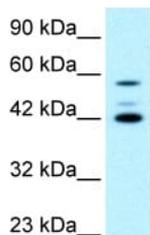
Ab42450 at 4 μ g/ml staining human PAX4 in human epithelial cells of intestinal villus by immunohistochemistry, paraffin embedded human intestine tissue.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX4 antibody (ab42450)



Ab42450 at 4 μ g/ml staining human PAX4 in epithelial cells of renal tubule by immunohistochemistry, paraffin embedded human kidney tissue.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX4 antibody (ab42450)



Western blot - Anti-PAX4 antibody (ab42450)

Anti-PAX4 antibody (ab42450) at 0.5 µg/ml + Jurkat cell lysate at 10 µg

Secondary

HRP conjugated anti-Rabbit IgG at 1/50000 dilution

Developed using the ECL technique.

Predicted band size: 37 kDa

Observed band size: 42 kDa

Additional bands at: 58 kDa. We are unsure as to the identity of these extra bands.

Gel concentration 12% Tris-glycine

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