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Immunotag™ Pax-4 Monoclonal Antibody

Antibody Specification

Catalog No.	ITM0507
Product Description	Immunotag™ Pax-4 Monoclonal Antibody
Size	50 µg, 100 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	Pax-4
Clonality	Monoclonal
Storage/Stability	-20°C/1 year
Application	WB,ELISA
Recommended Dilution	Western Blot: 1/500 - 1/2000. ELISA: 1/10000. Not yet tested in other applications.
Concentration	1 mg/ml
Reactive Species	Human
Host Species	Mouse
Immunogen	Purified recombinant fragment of human Pax-4 expressed in E. Coli.
Specificity	Pax-4 Monoclonal Antibody detects endogenous levels of Pax-4 protein.
Purification	Affinity purification
Form	Ascitic fluid containing 0.03% sodium azide.
Gene Name	PAX4
Accession No.	O43316 P32115
Alternate Names	PAX4; Paired box protein Pax-4
Description	paired box 4(PAX4) Homo sapiens This gene is a member of the paired box (PAX) family of transcription factors. Members of this gene family typically contain a paired box domain, an octapeptide, and a paired-type homeodomain. These genes play critical roles during fetal development and cancer growth. The paired box 4 gene is involved in pancreatic islet development and mouse studies have demonstrated a role for this gene in differentiation of insulin-producing beta cells. [provided by RefSeq, Jul 2008],

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Cell Pathway/ Category	Maturity onset diabetes of the young,
Protein Expression	Colon,Insulinoma,PCR rescued clones,Placenta,
Subcellular Localization	nucleus,nucleoplasm,
Protein Function	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.,disease:Defects in PAX4 are the cause of maturity-onset diabetes of the young type 9 (MODY9) [MIM:612225]. MODY [MIM:606391] is a form of diabetes mellitus characterized by an autosomal dominant mode of inheritance, age of onset of 25 years or younger and a primary defect in insulin secretion.,disease: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.,disease:Genetic variations in PAX4 are associated with susceptibility to ketosis-prone diabetes mellitus (KPD) [MIM:612227]. KPD belongs to a rare subgroup of type 2 diabetes with severe insulin deficiency, mostly observed in subjects of sub-Saharan African ancestry, such as west Africans, Caribbeans and African-Americans. Its phenotype is distinct from the common type 2 and type 1 diabetes. It is characterized by a fulminant initial insulin dependence, without the immunological markers observed in classical type 1 diabetes, followed by a subsequent clinical course which varies from non-insulin treated type 2 diabetes to insulin-dependent idiopathic type 1 diabetes. A severe dysfunction of the insulin-producing beta-cells is attested to by the observation that 25% of the subjects are insulin dependent at diabetes onset, whereas the remaining 75% will develop permanent insulin dependence within 10 years.,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. The Pax4v isoform appears to be a dominant negative form antagonizing PAX4 transcriptional activity.,sequence caution:According to the human genome assembly there is a stop codon in position 349.,similarity:Belongs to the paired homeobox family.,similarity:Contains 1 homeobox DNA-binding domain.,similarity:Contains 1 paired domain.,
Usage	For Research Use Only! Not for diagnostic or therapeutic procedures.