PDX1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	PDX1, Polyclonal Antibody
Full Product Name	PDX1, NT (Pancreas/Duodenum Homeobox Protein 1, Insulin Promoter Factor 1, Islet/Duodenum Homeobox-1, Somatostatin-transactivating Factor 1, Insulin Upstream Factor 1, Glucose-sensitive Factor, PDX-1, IPF-1, IDX-1, STF-1, IUF-1, GSF, IPF1) (MaxLight 550)
Product Gene Name	anti-PDX1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight550.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes human PDX1.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight550 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	30,771 Da
OMIM	125853
3D Structure	ModBase 3D Structure for P52945
Immunogen	KLH-conjugated synthetic peptide corresponding to a portion of amino acids within aa47-77 in the N-terminal region of human PDX1.
Conjugate	MaxLight550
Note	Preservative Free
Product Categories/Family for anti-PDX1 antibody	Antibodies; Transcription Factors; Homeobox (HOX)
Applications Tested/Suitable for anti-PDX1 antibody	Immunohistochemistry (IHC) Paraffin, FLISA, Western Blot (WB)
Application Notes for anti-PDX1 antibody	IHC-P: 1:10-1:50 FLISA: 1:1000 WB: 1:100-1:500 Applications are based on unconjugated antibody.
Related Product Information for anti-PDX1 antibody	MBS6492542 is an antibody targeting PDX1. Also known as PDX1, NT (Pancreas/Duodenum Homeobox Protein 1, Insulin Promoter Factor 1, Islet/Duodenum Homeobox-1, Somatostatin-transactivating Factor 1, Insulin Upstream Factor 1, Glucose-sensitive Factor, PDX-1, IPF-1, IDX-1, STF-1, IUF-1, GSF, IPF1) (MaxLight 550). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-PDX1 antibody	1. Ma, J., Carcinogenesis 29(7), 1327-1333 (2008). 2. Watada, H., Biochem. Biophys. Res. Commun. 229(3), 746-751 (1996).

Other Notes	Small volumes of anti-PDX1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PDX1. It may not necessarily be applicable to this product.

NCBI GI #	4557673
NCBI GeneID	3651
NCBI Accession #	NP_000200
UniProt Primary Accession #	P52945
UniProt Secondary Accession #	O60594; Q5VYW2
UniProt Related Accession #	P52945
GenBank Nucleotide #	NM_000209.3
NCBI Official Full Name	pancreas/duodenum homeobox protein 1
NCBI Official Synonym Full Names	pancreatic and duodenal homeobox 1
NCBI Official Symbol	PDX1
NCBI Official Synonym Symbols	GSF; IPF1; IUF1; IDX-1; MODY4; PDX-1; STF-1; PAGEN1
UniProt Protein Name	Pancreas/duodenum homeobox protein 1
UniProt Synonym Protein Names	Glucose-sensitive factor; GSF; Insulin promoter factor 1; IPF-1; Insulin upstream factor 1; IUF-1; Islet/duodenum homeobox-1; IDX-1; Somatostatin-transactivating factor 1
Protein Family	Pancreas/duodenum homeobox protein
UniProt Gene Name	PDX1
UniProt Synonym Gene Names	IPF1; STF1; PDX-1; GSF; IPF-1; IUF-1; IDX-1; STF-1
UniProt Entry Name	PDX1_HUMAN
NCBI Protein Information	pancreas/duodenum homeobox protein 1
NCBI Summary for PDX1	The protein encoded by this gene is a transcriptional activator of several genes, including insulin, somatostatin, glucokinase, islet amyloid polypeptide, and glucose transporter type 2. The encoded nuclear protein is involved in the early development of the pancreas and plays a major role in glucose-dependent regulation of insulin gene expression. Defects in this gene are a cause of pancreatic agenesis, which can lead to early-onset insulin-dependent diabetes mellitus (NIDDM), as well as maturity onset diabetes of the young type 4 (MODY4). [provided by RefSeq, Jul 2008]

UniProt Comments for PDX1	PDX1: Activates insulin, somatostatin, glucokinase, islet amyloid polypeptide and glucose transporter type 2 gene transcription. Particularly involved in glucose-dependent regulation of insulin gene transcription. Binds preferentially the DNA motif 5'-[CT]TAAT[TG]-3'. During development, specifies the early pancreatic epithelium, permitting its proliferation, branching and subsequent differentiation. At adult stage, required for maintaining the hormone-producing phenotype of the beta-cell. Interacts with the basic helix-loop-helix domains of TCF3(E47) and NEUROD1 and with HMG-I(Y). Interacts with SPOP. Interacts with the methyltransferase SETD7. Duodenum and pancreas (Langerhans islet beta cells and small subsets of endocrine non-beta-cells, at low levels in acinar cells). Belongs to the Antp homeobox family. IPF1/XlHbox-8 subfamily. Protein type: DNA-binding; Transcription factor Chromosomal Location of Human Ortholog: 13q12.1 Cellular Component: nucleus; cytosol Molecular Function: RNA polymerase II transcription factor activity, enhancer binding; protein heterodimerization activity; protein complex binding; chromatin binding; transcription factor binding; transcription factor activity Biological Process: transcription from RNA polymerase II promoter; response to nicotine; central nervous system development; response to glucocorticoid stimulus; exocrine pancreas development; negative regulation of transcription from RNA polymerase II promoter; glucose homeostasis; response to chlorate; response to vitamin; negative regulation of cell proliferation; detection of glucose; morphogenesis of embryonic epithelium; positive regulation of cell proliferation; response to wounding; response to iron(II) ion; positive regulation of DNA binding; response to drug; organ regeneration; smoothened signaling pathway; generation of precursor metabolites and energy; organ senescence; positive regulation of insulin secretion; glucose metabolic process; stem cell differentiation; liver development; endocrine pancreas development; organ morphogenesis; response to leucine; gut development; insulin secretion; response to cytokine stimulus; positive regulation of transcription from RNA polymerase II promoter; nitric oxide mediated signal transduction Disease: Maturity-onset Diabetes Of The Young, Type 4; Diabetes Mellitus, Permanent Neonatal; Pancreatic Agenesis 1; Diabetes Mellitus, Noninsulin-dependent
Research Articles on PDX1	**1.** CONCLUSIONS: Our results demonstrate the use of in vitro-synthesized PDX1 messenger RNA to differentiate hUC-MSCs into islet-like cells and pave the way toward the development of reprogramming and directed-differentiation methods
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