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PDX1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1692a

Product Information

Application	WB, FC, E
Primary Accession	P52945
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5A5
Isotype	IgG1
Calculated MW	30771
Description	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).
Immunogen	Purified recombinant fragment of human PDX1 expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	3651
Other Names	Pancreas/duodenum homeobox protein 1, PDX-1, 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, STF-1, PDX1, IPF1, STF1
Dilution	WB~~1/500 - 1/2000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PDX1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PDX1
Synonyms	IPF1, STF1
Function	Activates insulin, somatostatin, glucokinase, islet amyloid polypeptide and glucose transporter type 2 gene transcription. Particularly involved in glucose-dependent regulation of insulin gene transcription. As part of a PDX1:PBX1b:MEIS2b complex in pancreatic acinar cells is involved in the transcriptional activation of the ELA1 enhancer; the complex binds to the enhancer B element and cooperates with the transcription factor 1 complex (PTF1) bound to the enhancer A element. 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.
Cellular Location	Nucleus. Cytoplasm, cytosol.
Tissue Location	Duodenum and pancreas (Langerhans islet beta cells and small subsets of endocrine non-beta-cells, at low levels in acinar cells)

References

J Biol Chem. 2009 Dec 25;284(52):36482-90. Pancreatology. 2009;9(1-2):116-26.

Images

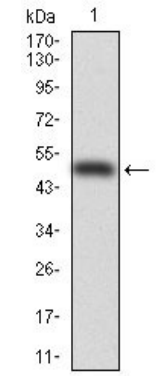


Figure 1: Western blot analysis using PDX1 mAb against human PDX1 (AA: 39-283) recombinant protein. (Expected MW is 52 kDa)

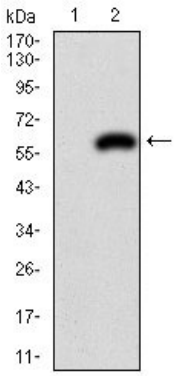
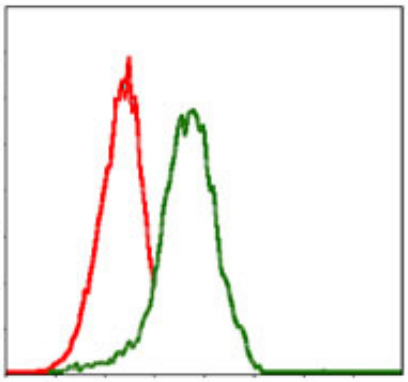


Figure 2: Western blot analysis using PDX1 mAb against HEK293 (1) and PDX1 (AA: 39-283)-hIgGFc transfected HEK293 (2) cell lysate.

Figure 3: Flow cytometric analysis of Jurkat cells using PDX1 mouse mAb (green) and negative control (red).



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