# IPF1 Antibody – Mouse Monoclonal

## PRODUCT OVERVIEW

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| **Product Name** | IPF1, Monoclonal Antibody |
| **Full Product Name** | IPF1 (Pancreatic and duodenal Homeobox 1, GSF, IDX-1, IPF1, IUF1, MODY4, PDX-1, STF-1) (MaxLight 750) |
| **Product Gene Name** | anti-IPF1 antibody |
| **Product Synonym Names** | Pancreatic and duodenal Homeobox 1; GSF; IDX-1; IPF1; IUF1; MODY4; PDX-1; STF-1 |
| **Clonality** | Monoclonal |
| **Isotype** | IgG2a,k |
| **Clone Number** | 4F7 |
| **Host** | Mouse |
| **Form/Format** | Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight750. |
| **Purity/Purification** | Purified |
| **Specificity** | Recognizes IPF1. |
| **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: MaxLight750 conjugates are sensitive to light. For maximu 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** | IPF1 (NP_000200, 109aa-208aa) full length recombinant protein with GST tag. MW of the GST tag alone is 26kD. |
| **Immunogen Sequence** | LEEPNRVQLPFPWMKSTKAHAWKGQWAGGAYAAEPEENKRTRTAYTRAQLLELEKEFLFNKYISRPRRVELAVMLNLTERHIKIWFQNRRMKWKKEEDK |
| **Conjugate** | MaxLight750 |
| **Product Categories/Family for anti-IPF1 antibody** | Antibodies; Transcription Factors; Homeobox (HOX) |
| **Applications Tested/Suitable for anti-IPF1 antibody** | FLISA |
| **Application Notes for anti-IPF1 antibody** | Applications are based on unconjugated antibody. |
| **Related Product Information for anti-IPF1 antibody** | 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] |

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| **Other Notes** | Small volumes of anti-IPF1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessa 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. |
| **Searchable Terms for IPF1 purchase** | MBS6238977 is an antibody targeting IPF1. Also known as IPF1 (Pancreatic and duodenal Homeobox 1, GSF, IDX-1, IPF1, IUF1, MODY4, PDX-1, ST 1) (MaxLight 750). Host: Mouse. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IPF1. It may not necessarily be applicable to this product.

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| **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 |
| **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 |

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| **UniProt Comments for IPF1** | 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.<br><br>Protein type: DNA-binding; Transcription factor<br><br>Chromosomal Location of Human Ortholog: 13q12.1<br><br>Cellular Component: nucleus; cytosol<br><br>Molecular Function: RNA polymerase II transcription factor activity, enhancer binding; protein heterodimerization activity; protein complex binding; chromatin binding; transcription factor binding; transcription factor activity<br><br>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<br><br>Disease: Maturity-onset Diabetes Of The Young, Type 4; Diabetes Mellitus, Permanent Neonatal; Pancreatic Agenesis 1; Diabetes Mellitus, Noninsulin-dependent |
| **Research Articles on IPF1** | **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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