

Recombinant Human Pancreatic And Duodenal Homeobox 1

Cat. No. PDX1-176H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Insulin promoter factor-1 Protein, produced in <i>E. coli</i> , contains 283 amino acids and has a molecular mass of 30.64 kDa.
Species	Human
Source	E.coli
ProteinLength	1-283 aa
Description	Pancreatic Duodenal Homeobox-1 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. Mutations in this gene may be involved in several disorders of the pancreas or in diabetes mellitus.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized Powder of liquid in PBS, pH 7.4.
Purity	Greater than 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

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Solubility	It is recommended to reconstitute the lyophilized PDX1 in sterile PBS, 10% glycerol to prepare a stock of 100µg/ml.
Biological Activity	The activity of human PDX-1 is determined by the ability to stimulate NeuroD1 gene expression in WB cells and binding to insulin promoter be EMSA assay.
Stability	Recombinant Human PDX1 although stable at 25°C 1 week, should be stored desiccated below -18°C. Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	PDX1 pancreatic and duodenal homeobox 1 [Homo sapiens]
Synonyms	GSF; IPF1; IUF1; IDX-1; MODY4; PDX-1; STF-1; PDX1; IUF-1; IPF-1; Pancreas/duodenum homeobox protein 1; Insulin promoter factor 1; Islet/duodenum homeobox-1; Somatostatin-transactivating factor 1; Insulin upstream factor 1; Glucose-sensitive factor; pancreatic and duodenal homeobox 1; glucose-sensitive factor; insulin upstream factor 1; somatostatin transcription factor 1; pancreatic-duodenal homeobox factor 1; homeodomain transcription factor
Gene ID	3651
mRNA Refseq	NM_000209
Protein Refseq	NP_000200
MIM	600733
UniProt ID	P52945
Chromosome	13q12.1

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Location	
Pathway	Maturity onset diabetes of the young; Type II diabetes mellitus; Regulation of beta-cell development
Function	protein binding; sequence-specific DNA binding; specific RNA polymerase II transcription factor activity; transcription activator activity; transcription factor activity
PDB rendering based on 2h1k.	