

Product datasheet

Recombinant Human PDX1 protein ab114175

1 Image

Overview

Product name	Recombinant Human PDX1 protein
Protein length	Full length protein

Description

Nature	Recombinant
Source	Wheat germ

Amino Acid Sequence

Accession	P52945
Species	Human
Sequence	MNGEEQYYAATQLYKDPCAFQRGPAPEFSASPPACLYMGRQPPPPPHPF PGALGALEQGSPPDISPYEVPPLADDPVAHLHHHLPAQLALPHPPAGPF PEGAEPGVLEEPNRVQLPPPWMKSTKAHAWKGQWAGGAYAAEPEENKTR TAYTRAQLLELEKEFLFNKYSRPRRVELAVMLNLTERHIKWFQNRMK WKKEEDKKRGGGTAVGGGGVAEPEQDCAVTSGEELLALPPPPPGGAVPP AAPVAAREGRLPPGLSASPQPSSVAPRRPQEPR
Molecular weight	58 kDa including tags
Amino acids	1 to 283

Specifications

Our [Abpromise guarantee](#) covers the use of **ab114175** in the following tested applications.

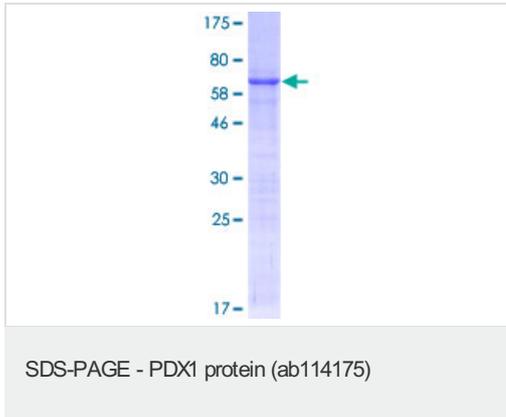
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Western blot ELISA
Form	Liquid
Additional notes	Protein concentration is above or equal to 0.05 mg/ml. Best used within three months from the date of receipt.

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 8.00 Constituents: 0.79% Tris HCl, 0.3% Glutathione
General Info	
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. 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.
Tissue specificity	Duodenum and pancreas (Langerhans islet beta cells and small subsets of endocrine non-beta-cells, at low levels in acinar cells).
Involvement in disease	Defects in PDX1 are a cause of pancreatic agenesis (PAC) [MIM:260370]. This autosomal recessive disorder is characterized by absence or hypoplasia of pancreas, leading to early-onset insulin-dependent diabetes mellitus. This was found in a frameshift mutation that produces a truncated protein and results in a second initiation that produces a second protein that act as a dominant negative mutant. Defects in PDX1 are a cause of non-insulin-dependent diabetes mellitus (NIDDM) [MIM:125853]; also known as diabetes mellitus type 2. NIDDM is characterized by an autosomal dominant mode of inheritance, onset during adulthood and insulin resistance. Defects in PDX1 are the cause of maturity-onset diabetes of the young type 4 (MODY4) [MIM:606392]; also symbolized MODY-4. MODY is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease.
Sequence similarities	Belongs to the Antp homeobox family. IPF1/XIHXbox-8 subfamily. Contains 1 homeobox DNA-binding domain.
Domain	The Antp-type hexapeptide mediates heterodimerization with PBX on a regulatory element of the somatostatin promoter. The homeodomain, which contains the nuclear localization signal, not only mediates DNA-binding, but also acts as a protein-protein interaction domain for TCF3(E47), NEUROD1 and HMG-I(Y).
Post-translational modifications	Phosphorylated by the SAPK2 pathway at high intracellular glucose concentration.
Cellular localization	Nucleus.

Images



ab114175 on a 12.5% SDS-PAGE Stained with Coomassie Blue.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors