

Recombinant Rat PDX1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52394

Size: 10ug, 100ug

Protein Name: Pancreas/duodenum homeobox protein 1 (Insulin promoter factor 1) (IPF-1) (Islet/duodenum homeobox 1) (IDX-1) (Somatostatin-transactivating factor 1) (STF-1)

Synonym: Pdx1, Ipf1

UniProt ID: P52947

UniProt Link: www.uniprot.org/uniprotkb/P52947/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 283 AA

Molecular Weight: 31 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MNSEEQYYAATQLYKDPCAFQRGPVPEFSANPPACLYMGRQPPPPPPPPQFAGSLGTLEQGSPDDI
SPYEVPLADDPAGAHLHHHLP AQLGLAHPPPGFPNGTETGGLEEPSRVHLPFPWMKSTKAHAW
KSQWAGGAYAAEPEENKRTRTAYTRAQLLELEKEFLFNKYISRP RRVELAVMLNLTERHIKIWFQNR
RMKWKKEEDKKRSGTTSGGGGGEEPEQDCAVTSGEELLALPPPPPPGGAVPSGVPAAAREGRL
PSGLSASPQPSSIAPLRPQEPR

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Pancreas/duodenum homeobox protein 1 (Insulin promoter factor 1) (IPF-1) (Islet/duodenum homeobox 1) (IDX-1) (Somatostatin-transactivating factor 1) (STF-1) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Activates insulin and somatostatin gene transcription. Key regulator of islet peptide hormone expression but also responsible for the development of the pancreas, most probably by determining maturation and differentiation of common pancreatic precursor cells in the developing gut. 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 the DNA sequence 5'-CC[CT]TAATGGG-3'.

Subcellular Localization: Nucleus . Cytoplasm, cytosol .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.