10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# PTF1A Rabbit pAb

Catalog # AP99871

## Product Information

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| **Application** | IHC-P, IHC-F, IF |
| **Primary Accession** | Q7RTS3 |
| **Other Accession** | Q7RTS3 |
| **Reactivity** | Rat, Mouse |
| **Predicted** | Pig, Human |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 34970 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human PTF1A |
| **Epitope Specificity** | 165-260/328 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SIMILARITY** | Contains 1 basic helix-loop-helix (bHLH) domain. |
| **DISEASE** | Defects in PTF1A are the cause of diabetes mellitus and cerebellar hypoplasia/agenesis (DMCH) [MIM:609069]. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | PTF1 is a pancreas-specific protein that functions as a component of the trimeric pancreas transcription factor 1 (PTF1) complex. Localizing to the nucleus, PTF1 contains one basic helix-loop-helix (bHLH) domain and is believed to play an important role in mammalian pancreatic development, functioning as a transcription factor that regulates the specification of all three pancreatic cell types. PTF1 interacts with RBP-J κ and, together, they cooperate in regulating the expression of PDX-1 (pancreas/duodenum homeobox protein 1), a key regulator of pancreatic islet development and insulin gene transcription in beta-cells. Loss of functional PTF1 can cause pancreatic progenitors to take on the normal fates of duodenal epithelia. Mutations in the gene encoding PTF1 lead to diabetes mellitus and cerebellar hypoplasia/agenesis, suggesting that PTF1 also plays and important role in cerebellar neurogenesis. |

## Additional Information

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| **Gene ID** | 256297 |
| **Other Names** | PACA; PAGEN2; PTF1-p48; bHLHa29; p48; PTF1p48; PTF1A_HUMAN; PTF1A; Class A basic helix-loop-helix protein 29 (bHLHa29); Pancreas-specific transcription factor 1a; bHLH transcription factor p48; p48 DNA-binding subunit of transcription factor PTF1 (PTF1-p48); PTF1A_MOUSE; PTF1A_RAT; pancreas associated transcription factor 1a; pancreas specific transcription factor, 1a |

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| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | PTF1A |
| **Synonyms** | BHLHA29, PTF1P48 |
| **Function** | Transcription factor implicated in the cell fate determination in various organs. Binds to the E-box consensus sequence 5'-CANNTG-3'. Plays a role in early and late pancreas development and differentiation. Important for determining whether cells allocated to the pancreatic buds continue towards pancreatic organogenesis or revert back to duodenal fates. May be involved in the maintenance of exocrine pancreas-specific gene expression including ELA1 and amylase. Required for the formation of pancreatic acinar and ductal cells. Plays an important role in cerebellar development. Directly regulated by FOXN4 and RORC during retinal development, FOXN4-PTF1A pathway plays a central role in directing the differentiation of retinal progenitors towards horizontal and amacrine fates. |
| **Cellular Location** | Nucleus {ECO:0000255\|PROSITE-ProRule:PRU00981}. Cytoplasm. Note=In chronic pancreatitis associated with pancreas cancer preferentially accumulates in the cytoplasm of acinar/ductular complexes. In the cytoplasm loses its ability to form the PTF1 complex (By similarity). |
| **Tissue Location** | Pancreas-specific (at protein level). Loss of expression is seen in ductal type pancreas cancers |

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