For Research Use Only

PDX1 Polyclonal antibody

Catalog Number:20989-1-AP 18 Publications

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Basic Information

Catalog Number:
20989-1-AP

Size:
150ul , Concentration: 500 ug/ml by Nanodrop and 267 ug/ml by Bradford method using BSA as the standard;

Source:
Rabbit

Isotype:
IgG

GenBank Accession Number:
NM_000209

GeneID (NCBI):
3651

UNIPROT ID:
P52945

Full Name:
pancreatic and duodenal homeobox 1

Calculated MW:
31 kDa

Observed MW:
40-50 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB: 1:500-1:1000
IHC: 1:50-1:500

Applications

Tested Applications:
WB, IHC, ELISA

Cited Applications:
WB, IHC, IF

Species Specificity:
human, mouse

Cited Species:
human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : PC-3 cells, BxPC-3 cells

IHC : human stomach cancer tissue,

Background Information

Pancreatic duodenal homeobox-1 protein (PDX-1), also designated INS promoter factor (IPF1), INS upstream factor 1 (IUF1), somatostatin trans-activating factor-1 (STF-1) and glucose-sensitive factor (GSF), is a 282 amino acid homeodomain-containing transcription factor present in pancreatic beta-cells. PDX-1 is a key regulator of pancreatic islet development and INS gene transcription in beta-cells. PDX-1 is expressed in all cells at the early stages of development and is mainly restricted to the pancreas and duodenum in adult. HNF-3b, HNF-1a and SP1 positively regulate the PDX-1 enhancer element. PDX-1 is also regulated by glucagon-like peptide through activation of adenylyl cyclase, which results in an increase in intracellular cAMP activity. The increased levels of cAMP, and the resulting activation of PKA, lead to an increase in PDX-1 transcription and translocation of the protein to the nuclei of beta-cells. PDX-1 binds to the sequence C(C/T) and can heterodimerize with PBX. PDX-1 is phosphorylated by the SAPK2 pathway under high glucose concentrations. Mutations in the PDX-1 gene can cause maturity-onset diabetes of the young and pancreatic agenesis.

Notable Publications

Author	Pubmed ID	Journal	Application
Nan Zhang	30455626	Front Neurosci	IF
Yanrong Yu	35616388	Biofabrication	IF
Xinlei Yao	32690606	J Biol Chem	WB

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
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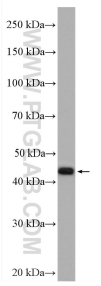
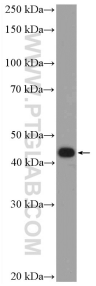
Selected Validation Data



BxPC-3 cells were subjected to SDS PAGE followed by western blot with 20989-1-AP (PDX1 antibody) at dilution of 1:1200 incubated at room temperature for 1.5 hours.



PC-3 cells were subjected to SDS PAGE followed by western blot with 20989-1-AP (PDX1 Antibody) at dilution of 1:600 incubated at room temperature for 1.5 hours.

Immunohistochemical analysis of paraffin-embedded human stomach cancer tissue slide using 20989-1-AP (PDX1 antibody) at dilution of 1:200 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).