

## Anti-Human PDX1 Purified


**Catalog Number:** 14-6500

**Also known as:** Pancreatic and duodenal homeobox protein, insulin promoter factor 1

**RUO: For Research Use Only. Not for use in diagnostic procedures.**

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### Product Information

 **Contents:** Anti-Human PDX1 Purified  
**Catalog Number:** 14-6500  
**Clone:** 2A12  
**Concentration:** 0.5 mg/mL  
**Host/Isotype:** Mouse IgG1

**Formulation:** aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer  
**Temperature Limitation:** Store at 2-8°C.



**Batch Code:** Refer to vial



**Use By:** Refer to vial

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### Description

This 2A12 monoclonal antibody reacts with the transcriptional activator PDX1, also known as pancreatic and duodenal homeobox protein and insulin promoter factor. Early expression of PDX1 during development marks the endoderm from which the pancreas, stomach, and duodenum derive. In the mature pancreas, expression is found in insulin-expressing beta-cells. PDX1 functions as an important regulator of several key pancreatic proteins including insulin, somatostatin, glucokinase, islet amyloid factor, and glucose transporter type 2. Deficiency in PDX1 results in a dysregulation of the beta-cell compensation of insulin resistance, which can lead to late-onset type 2 diabetes mellitus (formerly NIDDM) and maturity onset diabetes of the young type 4 (MODY4).

### Applications Reported

This 2A12 antibody has been reported for use in immunohistochemical staining of formalin-fixed paraffin embedded tissue sections.

### Applications Tested

This 2A12 antibody has been tested by immunohistochemistry on FFPE human pancreas (with IHC Antigen Retrieval Solution – Low pH (cat. 00-4955)) and can be used at less than or equal to 5 ug/mL. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

### References

Li SW, Koya V, Li Y, Donelan W, Lin P, Reeves WH, Yang LJ. Pancreatic duodenal homeobox 1 protein is a novel beta-cell-specific autoantigen for type I diabetes. *Lab Invest.* 2010 Jan;90(1):31-9.

Sachdeva MM, Claiborn KC, Khoo C, Yang J, Groff DN, Mirmira RG, Stoffers DA. Pdx1 (MODY4) regulates pancreatic beta cell susceptibility to ER stress. *Proc Natl Acad Sci U S A.* 2009 Nov 10;106(45):19090-5.

Fujimoto K, Hanson PT, Tran H, Ford EL, Han Z, Johnson JD, Schmidt RE, Green KG, Wice BM, Polonsky KS. Autophagy regulates pancreatic beta cell death in response to Pdx1 deficiency and nutrient deprivation. *J Biol Chem.* 2009 Oct 2;284(40):27664-73.

### Related Products

00-4955 IHC Antigen Retrieval Solution – Low pH (10X)

00-4960 PermMount™ Mounting Medium

14-4714 Mouse IgG1 K Isotype Control Purified (P3.6.2.8.1)

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