

**PDP1 Antibody (Center)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP12453c**

**Specification**

---

**PDP1 Antibody (Center) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">O9P0J1</a>
Other Accession	<a href="#">NP_001155253.1</a> , <a href="#">NP_001155252.1</a>
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	308-336

**PDP1 Antibody (Center) - Additional Information**

**Gene ID** 54704

**Other Names**

[Pyruvate dehydrogenase [acetyl-transferring]]-phosphatase 1, mitochondrial, PDP 1, Protein phosphatase 2C, Pyruvate dehydrogenase phosphatase catalytic subunit 1, PDPC 1, PDP1, PDP, PPM2C

**Target/Specificity**

This PDP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 308-336 amino acids from the Central region of human PDP1.

**Dilution**

WB~~1:2000  
IHC-P~~1:10~50

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

PDP1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**PDP1 Antibody (Center) - Protein Information**

**Name** PDP1 ([HGNC:9279](#))

**Synonyms** PDP, PPM2C

**Function** Mitochondrial enzyme that catalyzes the dephosphorylation and concomitant reactivation of the alpha subunit of the E1 component of the pyruvate dehydrogenase complex (PDC), thereby stimulating the conversion of pyruvate into acetyl-CoA.

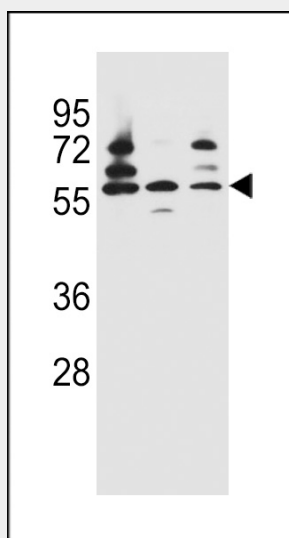
**Cellular Location**

Mitochondrion.

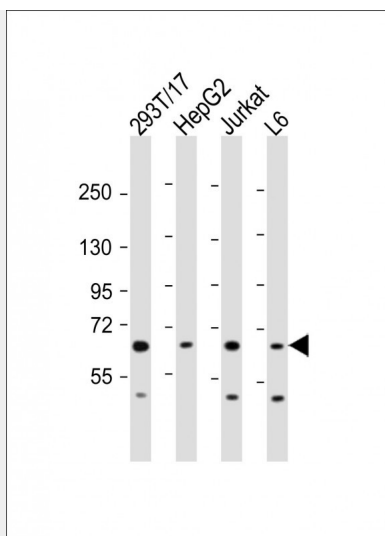
**PDP1 Antibody (Center) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

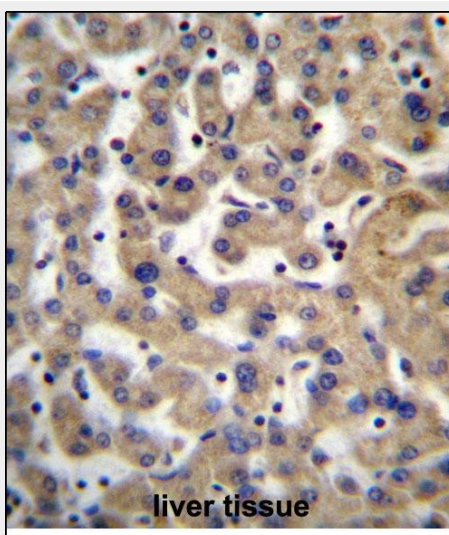
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**PDP1 Antibody (Center) - Images**

PDP1 Antibody (Center) (Cat. #AP12453c) western blot analysis in Jurkat, HepG2, 293 cell line lysates (35ug/lane). This demonstrates the PDP1 antibody detected the PDP1 protein (arrow).



All lanes : Anti-PDP1 Antibody (Center) at 1:2000 dilution Lane 1: 293T/17 whole cell lysate Lane 2: HepG2 whole cell lysate Lane 3: Jurkat whole cell lysate Lane 4: L6 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 61 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



PDP1 Antibody (Center) (Cat. #AP12453c) immunohistochemistry analysis in formalin fixed and paraffin embedded human liver tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of PDP1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

### **PDP1 Antibody (Center) - Background**

Pyruvate dehydrogenase (E1) is one of the three components (E1, E2, and E3) of the large pyruvate dehydrogenase complex. Pyruvate dehydrogenase kinases catalyze phosphorylation of serine residues of E1 to inactivate the E1 component and inhibit the complex. Pyruvate dehydrogenase phosphatases catalyze the dephosphorylation and activation of the E1 component to reverse the effects of pyruvate dehydrogenase kinases. Pyruvate dehydrogenase phosphatase is a heterodimer consisting of catalytic and regulatory subunits. Two catalytic subunits have been reported; one is predominantly expressed in skeletal muscle and another one is

much more abundant in the liver. The catalytic subunit, encoded by this gene, is the former, and belongs to the protein phosphatase 2C (PP2C) superfamily. Along with the pyruvate dehydrogenase complex and pyruvate dehydrogenase kinases, this enzyme is located in the mitochondrial matrix. Mutation in this gene causes pyruvate dehydrogenase phosphatase deficiency. Multiple alternatively spliced transcript variants encoding different isoforms have been identified.

#### **PDP1 Antibody (Center) - References**

Kato, J., et al. Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun. 66 (PT 3), 342-345 (2010) :  
Cameron, J.M., et al. Hum. Genet. 125(3):319-326(2009)  
Stellingwerff, T., et al. Am. J. Physiol. Endocrinol. Metab. 290 (2), E380-E388 (2006) :  
Maj, M.C., et al. J. Clin. Endocrinol. Metab. 90(7):4101-4107(2005)  
Piccinini, M., et al. Obes. Res. 13(4):678-686(2005)

#### **PDP1 Antibody (Center) - Citations**

- [Tyr-94 phosphorylation inhibits pyruvate dehydrogenase phosphatase 1 and promotes tumor growth.](#)