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PDX1 Antibody (T11)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2034d

Product Information

Application	WB, IF, IHC-P, E
Primary Accession	O00330
Other Accession	P52947, P52946, P52945
Reactivity	Human, Rat, Mouse
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB15204
Calculated MW	54122
Antigen Region	1-30

Additional Information

Gene ID	8050
Other Names	Pyruvate dehydrogenase protein X component, mitochondrial, Dihydrolipoamide dehydrogenase-binding protein of pyruvate dehydrogenase complex, E3-binding protein, E3BP, Lipoyl-containing pyruvate dehydrogenase complex component X, proX, PDHX, PDX1
Target/Specificity	This PDX1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from human PDX1.
Dilution	WB~~1:1000 IF~~1:100 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
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	PDX1 Antibody (T11) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PDHX

Synonyms	PDX1
Function	Required for anchoring dihydrolipoamide dehydrogenase (E3) to the dihydrolipoamide transacetylase (E2) core of the pyruvate dehydrogenase complexes of eukaryotes. This specific binding is essential for a functional PDH complex.
Cellular Location	Mitochondrion matrix.

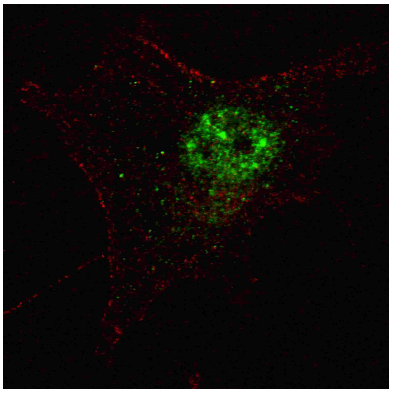
Background

PDX1, located in the mitochondrial matrix, is required for anchoring dihydrolipoamide dehydrogenase (E3) to the dihydrolipoamide transacetylase (E2) core of the pyruvate dehydrogenase complexes of eukaryotes. This specific binding is essential for a functional PDH complex. Eukaryotic pyruvate dehydrogenase complexes are organized about a core consisting of the oligomeric dihydrolipoamide acetyl-transferase, around which are arranged multiple copies of pyruvate dehydrogenase, dihydrolipoamide dehydrogenase and protein X bound by noncovalent bonds. Defects in PDHX are a cause of lacticacidemia. PDX1 belongs to the 2-oxoacid dehydrogenase family and contains 1 lipoyl-binding domain.

References

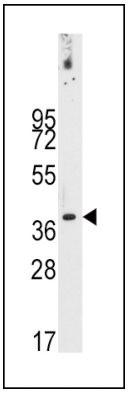
References for protein:
1.Ling, M., et al., Hum. Mol. Genet. 7(3):501-505 (1998).
2.Aral, B., et al., Am. J. Hum. Genet. 61(6):1318-1326 (1997).
3.Harris, R.A., et al., J. Biol. Chem. 272(32):19746-19751 (1997).
4.Yu, W., et al., Genome Res. 7(4):353-358 (1997).
References for SY5Y (SH-SY5Y; ATCC#CRL-2266): 1. Ross RA, et al. Coordinate morphological and biochemical interconversion of human neuroblastoma cells. J. Natl. Cancer Inst. 71: 741-749, 1983. [PubMed: 6137586]; 2. Biedler JL, et al. Multiple neurotransmitter synthesis by human neuroblastoma cell lines and clones. Cancer Res. 38: 3751-3757, 1978. [PubMed: 29704]

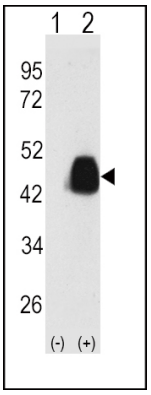
Images



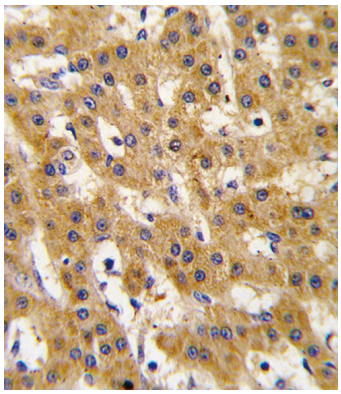
Fluorescent confocal image of SY5Y cells stained with PDX1 (T11) antibody. SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP2034d PDX1 (T11) primary antibody (1:100, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min). Note the highly specific localization of the PDX1 immunosignal to the nucleus, supported by Human Protein Atlas Data (http://www.proteinatlas.org/ENSG00000110435).

Western blot analysis of anti-PDX1 Antibody (T11) (Cat.#AP2034d) in NCI-H460 cell line lysates (35ug/lane).PDX1-T11(arrow) was detected using the purified Pab.





Western blot analysis of PDX1 (arrow) using PDX1 Antibody (T11) (Cat.#AP2034d). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the PDX1 gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with Phospho-PDX1-T11.ctrl antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.