

# PDHA1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)  
Catalog # AP9652c

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">P08559</a>
<b>Other Accession</b>	<a href="#">P26284</a> , <a href="#">P29804</a> , <a href="#">P35486</a> , <a href="#">Q8HXW9</a> , <a href="#">A7MB35</a>
<b>Reactivity</b>	Human
<b>Predicted</b>	Bovine, Monkey, Mouse, Pig, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB24303
<b>Calculated MW</b>	43296
<b>Antigen Region</b>	226-255

## Additional Information

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<b>Gene ID</b>	5160
<b>Other Names</b>	Pyruvate dehydrogenase E1 component subunit alpha, somatic form, mitochondrial, PDHE1-A type I, PDHA1, PHE1A
<b>Target/Specificity</b>	This PDHA1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 226-255 amino acids from the Central region of human PDHA1.
<b>Dilution</b>	WB~~1:1000 E~~Use at an assay dependent concentration.
<b>Format</b>	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.
<b>Storage</b>	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.
<b>Precautions</b>	PDHA1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	PDHA1 ( <a href="#">HGNC:8806</a> )
<b>Synonyms</b>	PHE1A

## Function

Together with PDHB forms the heterotetrameric E1 subunit of the pyruvate dehydrogenase (PDH) complex (PubMed:[17474719](#), PubMed:[19081061](#)). The PDH complex catalyzes the overall conversion of pyruvate to acetyl-CoA and CO<sub>2</sub>, and thereby links cytoplasmic glycolysis and the mitochondrial tricarboxylic acid (TCA) cycle (PubMed:[19081061](#), PubMed:[7782287](#)). It contains multiple copies of three enzymatic components: pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (E2) and dihydrolipoamide dehydrogenase (E3) (Probable). The E1 subunit catalyzes both the thiamine pyrophosphate (TPP)-dependent decarboxylation of pyruvate and the reductive acetylation of a lipoyl group covalently linked to the lipoyl-bearing domains of E2 (PubMed:[17474719](#), PubMed:[19081061](#), PubMed:[7782287](#)).

## Cellular Location

Mitochondrion matrix {ECO:0000250 | UniProtKB:P26284}

## Tissue Location

Ubiquitous.

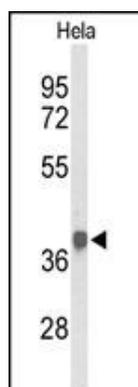
## Background

The pyruvate dehydrogenase (PDH) complex is a nuclear-encoded mitochondrial multienzyme complex that catalyzes the overall conversion of pyruvate to acetyl-CoA and CO<sub>2</sub>, and provides the primary link between glycolysis and the tricarboxylic acid (TCA) cycle. The PDH complex is composed of multiple copies of three enzymatic components: pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (E2) and lipoamide dehydrogenase (E3). The E1 enzyme is a heterotetramer of two alpha and two beta subunits. This gene encodes the E1 alpha 1 subunit containing the E1 active site, and plays a key role in the function of the PDH complex. Mutations in this gene are associated with pyruvate dehydrogenase E1-alpha deficiency and X-linked Leigh syndrome.

## References

- Glushakova, L.G., et al. Mol. Genet. Metab. 98(3):289-299(2009)  
Joao Silva, M., et al. Eur. J. Pediatr. 168(1):17-22(2009)  
Boichard, A., et al. Mol. Genet. Metab. 93(3):323-330(2008)

## Images



Western blot analysis of PDHA1 Antibody (Center) (Cat. #AP9652c) in HeLa cell line lysates (35ug/lane). PDHA1 (arrow) was detected using the purified Pab.

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