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PDHA1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9652c

Product Information

Application	WB, E
Primary Accession	P08559
Other Accession	P26284, P29804, P35486, Q8HXW9, A7MB35
Reactivity	Human
Predicted	Bovine, Monkey, Mouse, Pig, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24303
Calculated MW	43296
Antigen Region	226-255

Additional Information

Gene ID	5160
Other Names	Pyruvate dehydrogenase E1 component subunit alpha, somatic form, mitochondrial, PDHE1-A type I, PDHA1, PHE1A
Target/Specificity	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.
Dilution	WB~~1:1000 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	PDHA1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PDHA1 (HGNC:8806)
Synonyms	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(2), 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.

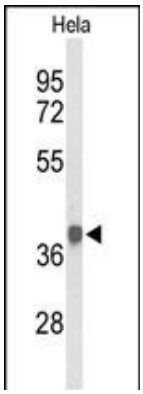
Background

The pyruvate dehydrogenase (PDH) complex is a nuclear-encoded mitochondrial multienzyme complex that catalyzes the overall conversion of pyruvate to acetyl-CoA and CO(2), 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'.