

Rabbit PDHA1 Polyclonal Antibody | anti-PDHA1 antibody

PDHA1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326445	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

PDHA1; Polyclonal Antibody; PDHA1 Antibody; ODP_A_HUMAN; PDH; PDHA; PDHCE1A; PDHE1 A type I; PDHE1-A type I; PHE1A; Pyruvate Dehydrogenase (lipoamide) alpha 1; Pyruvate dehydrogenase complex; E1 alpha polypeptide 1; Pyruvate Dehydrogenase E1 alpha; Pyruvate dehydrogenase E1 component subunit alpha; somatic form; mitochondrial; anti-PDHA1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	PDHA1 antibody detects endogenous levels of total PDHA1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	390
Applicable Applications for anti-PDHA1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PDHA1
Subcellular Location	Mitochondrion Matrix.
Tissue Specificity	Ubiquitous.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemistry)

AAA326445 at 1/100 staining Human breast cancer tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)

Western blot analysis of extracts of HeLa, using PDHA1 antibody. The lane on the left is treated with the antigen-specific peptide.



IF (Immunofluorescence)

AAA326445 staining A549 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-PDHA1 antibody	Description: The pyruvate dehydrogenase complex catalyzes the conversion of pyruvate and CoA into acetyl-CoA and CO2 in the presence of NAD+. Acetyl-CoA then goes into the citric acid cycle where it reacts with oxaloacetate to form citrate. Acetyl-CoA is also used for fatty acid and cholesterol biosynthesis. The reaction of oxidative decarboxylation of pyruvate therefore serves as a critical link between glycolysis and the citric acid cycle and lipid metabolism. In mammalian cells, the pyruvate dehydrogenase complex is located in the mitochondrial matrix (1). This complex is comprised of three enzymes: pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (E2) and dihydrolipoamide dehydrogenase (E3). Pyruvate dehydrogenase (E1) consists of two subunits: alpha and beta. This enzyme catalyzes the removal of CO2 from pyruvate. Mutations in the alpha subunits of pyruvate dehydrogenase (E1) lead to congenital defects that are usually associated with lactic acidosis, neurodegeneration and early death (2). Subunit Structure: Heterotetramer of two PDHA1 and two PDHB subunits. The heterotetramer interacts with DLAT, and is part of the multimeric pyruvate dehydrogenase complex that contains multiple copies of pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (DLAT, E2) and lipoamide dehydrogenase (DLD, E3). These subunits are bound to an inner core composed of about 48 DLAT and 12 PDHX molecules. Post-translational Modifications: Phosphorylation at Ser-232, Ser-293 and Ser-300 by PDK family kinases inactivates the enzyme; for this phosphorylation at a single site is sufficient. Dephosphorylation at all three sites, i.e. at Ser-232, Ser-293 and Ser-300, is required for reactivation. Acetylation alters the phosphorylation pattern. Deacetylated by SIRT3 (By similarity).
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4505685
NCBI GeneID	5160
NCBI Accession #	NP_000275.1
NCBI GenBank Nucleotide #	NM_000284.3
UniProt Accession #	P08559; Q53H41; Q5JPT8; Q9NP12; Q9UBJ8; Q9UBU0; Q9UNG4; Q9UNG5; A5YVE9; B2R5P7; B7Z3T7; B7Z3X5
Molecular Weight	Observed: 43 kDa Predicted: 44 kDa
NCBI Official Full Name	pyruvate dehydrogenase E1 component subunit alpha, somatic form, mitochondrial isoform 1
NCBI Official Synonym Full Names	pyruvate dehydrogenase E1 alpha 1 subunit
NCBI Official Symbol	PDHA1
NCBI Official Synonym Symbols	PDHA; PDHAD; PHE1A; PDHCE1A
NCBI Protein Information	pyruvate dehydrogenase E1 component subunit alpha, somatic form, mitochondrial
UniProt Protein Name	Pyruvate dehydrogenase E1 component subunit alpha, somatic form, mitochondrial
UniProt Gene Name	PDHA1
UniProt Synonym Gene Names	PHE1A

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/pdha1-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/326445>