Product Name: PDHA1 Rabbit Polyclonal Antibody

Catalog #: APRab15911



Summary

Production Name PDHA1 Rabbit Polyclonal Antibody

Description Rabbit Polyclonal Antibody

Host Rabbit
Application WB

Reactivity Human, Mouse, Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name PDHA1 ODPA

PDHA1; PHE1A; Pyruvate dehydrogenase E1 component subunit alpha; somatic form, **Alternative Names**

mitochondrial; PDHE1-A type I

Gene ID 5160.0

P08559. The antiserum was produced against synthesized peptide derived from human

PDHA1. AA range:314-363

Application

SwissProt ID

Dilution Ratio WB 1:500-1:2000. ELISA: 1:40000.

Molecular Weight 43kD

Background

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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. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.[provided by RefSeg, Mar 2010],catalytic activity:Pyruvate + [dihydrolipoyllysine-residue acetyltransferase] lipoyllysine = [dihydrolipoyllysine-residue acetyltransferase] Sacetyldihydrolipoyllysine + CO(2),,cofactor:Thiamine pyrophosphate,,disease:Defects in PDHA1 are a cause of pyruvate decarboxylase E1 component deficiency (PDHE1 deficiency) [MIM:312170]. PDHE1 deficiency is the most common enzyme defect in patients with primary lactic acidosis. It is associated with variable clinical phenotypes ranging from neonatal death to prolonged survival complicated by developmental delay, seizures, ataxia, apnea, and in some cases to an X-linked form of Leigh syndrome (LS) (Leigh encephalomyelopathy), disease: Defects in PDHA1 are the cause of X-linked Leigh syndrome (LS) [MIM:308930]. LS is an early-onset progressive neurodegenerative disorder with a characteristic neuropathology consisting of focal, bilateral lesions in one or more areas of the central nervous system, including the brainstem, thalamus, basal ganglia, cerebellum, and spinal cord. The lesions are areas of demyelination, gliosis, necrosis, spongiosis, or capillary proliferation. Clinical symptoms depend on which areas of the central nervous system are involved. The most common underlying cause is a defect in oxidative phosphorylation. LS may be a feature of a deficiency of any of the mitochondrial respiratory chain complexes, enzyme regulation: E1 activity is regulated by phosphorylation (inactivation) and dephosphorylation (activation) of the alpha subunit, function: The pyruvate dehydrogenase complex catalyzes the overall conversion of pyruvate to acetyl-CoA and CO(2). It contains multiple copies of three enzymatic components: pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (E2) and lipoamide dehydrogenase (E3)., subunit: Tetramer of 2 alpha and 2 beta subunits., tissue specificity: Ubiquitous.,

Research Area

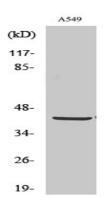
Glycolysis / Gluconeogenesis; Citrate cycle (TCA cycle); Valine; leucine and isoleucine biosynthesis; Pyruvate metabolism; Butanoate metabolism;

Image Data

Web: https://www.enkilife.com E-mail: order@enkilife.com techsupport@enkilife.com Tel: 0086-27-87002838

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Western Blot analysis of various cells using PDHA1 Polyclonal Antibody diluted at 1: 2000

Note

For research use only.