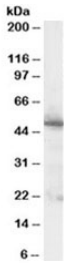
Pyruvate Dehydrogenase Protein X Antibody / PDHX Polyclonal Antibody (R34643)

Catalog No.	Formulation	Size
R34643-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat, Dog
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	8050
Applications	Western blot: 1-3ug/ml Immunohistochemistry (FFPE): 2-4ug/ml ELISA (peptide) LOD: 1:32000
Limitations	This Pyruvate Dehydrogenase Protein X Antibody / PDHX Polyclonal Antibody is available for research use only.



Pyruvate Dehydrogenase Protein X Antibody Detection in Human Pancreas by WB. Western blot testing of human pancreas lysate with Pyruvate Dehydrogenase Protein X Antibody at 1 ug/ml shows a strong, discrete major band migrating between the 44 and 66 kDa molecular weight markers, near the predicted molecular weight of approximately 54 kDa for PDHX. The blot displays comparatively little additional reactivity, producing a well-defined signal in the expected molecular weight region. This experiment demonstrates detection of pyruvate dehydrogenase protein X, also known as E3-binding protein, in human pancreas using this PDHX Polyclonal Antibody.

Description

Pyruvate Dehydrogenase Protein X Antibody recognizes PDHX, a mitochondrial component of the pyruvate dehydrogenase complex that helps connect glycolysis with the citric acid cycle through the conversion of pyruvate to

acetyl-CoA. PDHX is also known as E3-binding protein (E3BP) and serves an important structural role within the multienzyme complex. Rather than functioning as one of its principal catalytic enzymes, PDHX participates in organization of the complex by recruiting dihydrolipoamide dehydrogenase (E3) to the E2-containing core.

The pyruvate dehydrogenase complex is located in the mitochondrial matrix and consists of multiple catalytic, structural, and regulatory components. PDHX associates with the E2 core and provides binding sites for E3, positioning the enzyme within the complex for efficient electron transfer during pyruvate oxidation. Proper assembly of these components supports production of acetyl-CoA for entry into the citric acid cycle and consequently contributes to carbohydrate metabolism, mitochondrial respiration, and cellular energy production.

Pathogenic variants in PDHX can cause pyruvate dehydrogenase E3-binding protein deficiency, a form of pyruvate dehydrogenase complex deficiency associated with impaired oxidative metabolism. Disruption of complex activity can interfere with the normal utilization of pyruvate and contribute to increased lactate production. PDHX is therefore investigated in mitochondrial disease, cellular bioenergetics, carbohydrate metabolism, and disorders affecting pyruvate oxidation and energy production.

This PDHX Polyclonal Antibody is a goat polyclonal generated against a peptide derived from human pyruvate dehydrogenase protein X. PDHX has historically also been designated PDX1, although PDX1 is now the official gene symbol for an unrelated pancreatic homeobox transcription factor. Using PDHX as the principal designation distinguishes this mitochondrial E3-binding protein from that separate transcription factor. NSJ Bioreagents supplies this antibody for research use only.

A Pyruvate Dehydrogenase Protein X Antibody can be used to investigate PDHX expression, pyruvate dehydrogenase complex biology, mitochondrial metabolism, E3 recruitment, pyruvate oxidation, and metabolic disease.

For broader PDHX validation across multiple applications, see our PDHX Antibody / Pyruvate Dehydrogenase Protein X Antibody page.

Application Notes

Optimal dilution of the Pyruvate Dehydrogenase Protein X Antibody / PDHX Polyclonal Antibody should be determined by the researcher.

Immunogen

Amino acids KSFKANLENPIRLA were used as the immunogen for this PDHX / Pyruvate Dehydrogenase Protein X Antibody.

Storage

Aliquot and store the PDHX / Pyruvate Dehydrogenase Protein X Antibody at -20oC.

Alternate Names

PDHX antibody, E3-binding protein antibody, E3BP antibody, dihydrolipoamide dehydrogenase-binding protein antibody, PDX1 antibody, proX antibody

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