

PDHA2 (D-17): sc-103807

BACKGROUND

The pyruvate dehydrogenase (PDH) complex is a nuclear-encoded mitochondrial matrix enzyme complex that functions as the primary link between glycolysis and the tricarboxylic acid (TCA) cycle by catalyzing the irreversible conversion of pyruvate into acetyl-CoA, an essential step in aerobic glucose metabolism. PDHA2 (pyruvate dehydrogenase α 2), also known as PDHAL, is a 388 amino acid mitochondrial matrix protein expressed in postmeiotic spermatogenic cells. Composed of a tetramer containing two α and two β subunits, PDHA2 consists multiple copies of three enzymatic components: pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (E2) and lipoamide dehydrogenase (E3). PDHA2 is suggested to participate in cell proliferation and may be involved in prostate cancer. PDHA2 is encoded by a gene located on human chromosome 4, which encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes.

REFERENCES

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- Kumar, V., et al. 2006. Activity of pyruvate dehydrogenase A (PDHA) in hamster spermatozoa correlates positively with hyperactivation and is associated with sperm capacitation. *Biol. Reprod.* 75: 767-777.
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CHROMOSOMAL LOCATION

Genetic locus: Pdha2 (mouse) mapping to 3 H1.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SOURCE

PDHA2 (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PDHA2 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103807 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

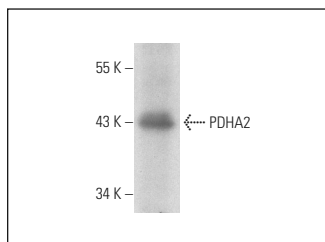
PDHA2 (D-17) is recommended for detection of PDHA2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PDHA2 siRNA (m): sc-106393, PDHA2 shRNA Plasmid (m): sc-106393-SH and PDHA2 shRNA (m) Lentiviral Particles: sc-106393-V.

Molecular Weight of PDHA2: 41 kDa.

Positive Controls: mouse testis extract: sc-2405.

DATA



PDHA2 (D-17): sc-103807. Western blot analysis of PDHA2 expression in mouse testis tissue extract.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.