**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. The E1 enzyme of the PDH complex is made up of a heterotetramer of two α and two β subunits. The E1α subunit (PDH-E1α) contains the E1 active site and plays a key role in the function of the PDH complex. The PDH complex is regulated by phosphorylation and dephosphorylation of α and β subunits. The E1 enzyme of the PDH complex is made up of a heterotetramer of two α and two β subunits. The E1α subunit (PDH-E1α) contains the E1 active site and plays a key role in the function of the PDH complex. The PDH complex is regulated by phosphorylation and dephosphorylation of α and β subunits.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: PDHA1 (human) mapping to Xp22.12; Pdha1 (mouse) mapping to Xp22.12.

**SOURCE**

PDH-E1α (E-23) is a Protein A purified rabbit polyclonal antibody raised against synthetic PDH-E1α peptide of human origin.

**PRODUCT**

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

**STORAGE**

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

**APPLICATIONS**

PDH-E1α (E-23) is recommended for detection of PDH-E1α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:1000-1:10000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PDH-E1α siRNA (h): sc-91064, PDH-E1α siRNA (m): sc-77407, PDH-E1α shRNA Plasmid (h): sc-91064-SH, PDH-E1α shRNA Plasmid (m): sc-77407-SH, PDH-E1α shRNA (h) Lentiviral Particles: sc-91064-V and PDH-E1α shRNA (m) Lentiviral Particles: sc-77407-V.

Molecular Weight of PDH-E1α: 43 kDa.

Positive Controls: rat brain extract: sc-2392, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

**DATA**

SDS-PAGE analysis of molecular weight of PDH-E1α and comparison with the human cDNA. Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

**RESEARCH USE**

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

**PROTOCOLS**

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

**PRODUCTS**

Try PDH-E1α (D-6): sc-377092, our highly recommended monoclonal alternative to PDH-E1α (E-23). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see PDH-E1α (D-6): sc-377092.