**PDH-E1α (D-6): sc-377092**

### 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 E1-α 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 PDH-E1α. The gene encoding for PDH-E1α maps to chromosome Xp22.12, and a 20-bp deletion in the last exon of this gene is sufficient to cause PDH deficiency, which causes a broad range of symptoms including the development of seizures, mental retardation and spasticity, as well as intermittent episodes of lactic acidosis associated with cerebellar ataxia.

### CHROMOSOMAL LOCATION
Genetic locus: PDHA1 (human) mapping to Xp22.12; Pdha1 (mouse) mapping to X F4.

### SOURCE
PDH-E1α (D-6) is a mouse monoclonal antibody raised against amino acids 31-161 mapping near the N-terminus of PDH-E1α of human origin.

### PRODUCT
Each vial contains 200 µg IgG2α kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PDH-E1α (D-6) is available conjugated to agarose (sc-377092 AC), 500 µg/ml. PDH-E1α (D-6) is available conjugated to agarose (sc-377092 AC), 500 µg/ml, for WB, HRP, and ELISA; to either phycocyanin (sc-377092 PE), fluorescein (sc-377092 FITC), Alexa Fluor® 546 (sc-77092 AF546), Alexa Fluor® 647 (sc-77092 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-77092 AF680) or Alexa Fluor® 790 (sc-77092 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

### APPLICATIONS
PDH-E1α (D-6) is recommended for detection of PDH-E1α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PDH-E1α (D-6) is also recommended for detection of PDH-E1α in additional species, including bovine and porcine.

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: Hep G2 cell lysate: sc-2227 or Sol8 cell lysate: sc-2249.

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

### DATA
- **PDH-E1α (D-6)**: sc-377092. Western blot analysis of PDH-E1α expression in Hep G2 (A), HeLa (B), Sol8 (C), C2C12 (D), LB5 (E) and LB6 (F) whole cell lysates.

### SELECT PRODUCT CITATIONS


### RESEARCH USE
For research use only, not for use in diagnostic procedures.

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