**BACKGROUND**

Normal adjustment to changes in blood glucose levels depends on Insulin signaling as well as enzymes involved in the regulation of gluconeogenesis. Pathological changes to this process are central to the type 2 diabetes phenotype. Phosphoenolpyruvate carboxykinase (PEPCK) plays an important role in this process by stimulating hepatic glucose production. PEPCK expression increases in response to glucagon and glucocorticoids, while Insulin suppresses expression. Modulation of the signals governing PEPCK levels present a potential therapeutic approach to the treatment of Insulin resistance in this process by stimulating hepatic glucose production. PEPCK expression.

**CHROMOSOMAL LOCATION**

Genetic locus: PCK2 (human) mapping to 14q11.2, PCK1 (human) mapping to 20q13.31, Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31; Pck2 (mouse) mapping to 14 C3, Pck1 (mouse) mapping to 20q13.31.

**SOURCE**

PEPCK (F-3) is a mouse monoclonal antibody raised against amino acids 341-640 mapping at the C-terminus of PEPCK-M of human origin.

**PRODUCT**

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

PEPCK (F-3) is available conjugated to agarose (sc-271029 AC), 500 µg/0.25 ml agarose in 1 ml, for WB (sc-271029 AC); to either phycoerythrin (sc-271029 PE), fluorescein (sc-271029 FITC), Alexa Fluor® 488 (sc-271029 AF488), Alexa Fluor® 546 (sc-271029 AF546), Alexa Fluor® 594 (sc-271029 AF594) or Alexa Fluor® 647 (sc-271029 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either AlexaFluor® 680 ELISA; to either phycoerythrin (sc-271029 PE), fluorescein (sc-271029 FITC), Alexa Fluor® 594 (sc-271029 AF594) or Alexa Fluor® 647 (sc-271029 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271029 AF680) or Alexa Fluor® 790 (sc-271029 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**STORAGE**

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

**APPLICATIONS**

PEPCK (F-3) is recommended for detection of PEPCK-M and PEPCK-C 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).

Molecular Weight of PEPCK: 62 kDa.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGx BP-HRP: sc-516102 or m-IgGx BP-HRP (Cruz Marker); sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGx BP-FITC: sc-516140 or m-IgGx BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGx BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistoamount: sc-45086, or Organo/Limonene Mount: sc-45087.

**DATA**

PEPCK (F-3) sc-271029. Near-infrared western blot analysis of PEPCK expression in A-431 (A), ZR-75-1 (B), Caki-1 (C), NIH/3T3 (D) and c4 (E) whole cells lysates and rat liver tissue extract (F). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGx BP-CALF 790 sc-516181.

PEPCK (F-3) Alexa Fluor® 488 sc-271029 AF488. Direct immunofluorescence staining of formalin fixed SW480 cells showing mitochondrial localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (A). PEPCK (F-3): sc-271029. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (B).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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