**PEPCK (F-3): sc-271029**

**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. Phosphoehypoxalpyruvate 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 presents a potential therapeutic approach to the treatment of insulin resistance and consequently obesity. The cytosolic form of PEPCK, known as PEPCK-C, and the mitochondrial form, known as PEPCK-M, are encoded by two different nuclear genes in mouse, human and chicken.

**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 2 H3.

**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 IgG, 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 IF; to HRP (sc-271029 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; 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 Alexa Fluor® 680 (sc-271029 AF680) or Alexa Fluor® 790 (sc-271029 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**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-C isoforms 1/2: 70/34.

Molecular Weight of PEPCK-M isoforms 1/2/3: 71/48/56.

Positive Controls: A-431 whole cell lysate: sc-2201, ZR-75-1 cell lysate: sc-2241 or Caki-1 cell lysate: sc-2224.

**RESEARCH USE**

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

**STORAGE**

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

**DATA**

![Image](https://example.com/data.png)

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

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