**PEPCK (F-2): sc-166778**

**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 and consequently obesity. The cystolic 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.

**REFERENCES**

**CHROMOSOMAL LOCATION**
Genetic locus: PCK1 (human) mapping to 20q13.31, PCK2 (human) mapping to 14q11.2; Pck1 (mouse) mapping to 2 H3, Pck2 (mouse) mapping to 14 C3.

**SOURCE**
PEPCK (F-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 428-461 near the C-terminus of Phosphoenolpyruvate carboxykinase 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-2) is available conjugated to agarose (sc-166778 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166778 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166778 PE), fluorescein (sc-166778 FITC), Alexa Fluor® 488 (sc-166778 AF488), Alexa Fluor® 546 (sc-166778 AF546), Alexa Fluor® 594 (sc-166778 AF594) or Alexa Fluor® 647 (sc-166778 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166778 AF680) or Alexa Fluor® 790 (sc-166778 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166778 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**
PEPCK (F-2) 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-embbeded 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).

PEPCK (F-2) is also recommended for detection of PEPCK-M and PEPCK-C in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of PEPCK-C isoforms 1/2: 70/34.
Molecular Weight of PEPCK-M isoforms 1/2/3: 71/48/56.
Positive Controls: KNRK whole cell lysate: sc-2214, Hep G2 cell lysate: sc-2227 or mouse kidney extract: sc-2255.

**SELECT PRODUCT CITATIONS**

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

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