Human/Mouse/Rat PCK1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF6787

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat PCK1 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse PCK1 Lys551-Met622 Accession # Q9Z2V4
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

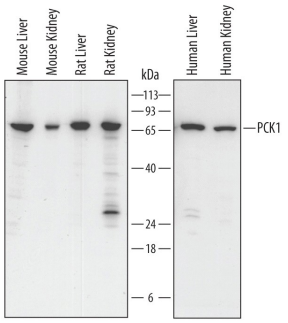
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below

DATA

Western Blot



Detection of Human, Mouse, and Rat PCK1 by Western Blot. Western blot shows lysates of mouse liver tissue, mouse kidney tissue, rat liver tissue, rat kidney tissue, human liver tissue, and human kidney tissue. PVDF Membrane was probed with 0.2 µg/mL of Sheep Anti-Human/Mouse/Rat PCK1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6787) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for PCK1 at approximately 68 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

PCK1 (Phosphoenolpyruvate carboxykinase 1; also PEPCK-C [cytosolic]) is a monomeric, 67-68 kDa member of the PEP carboxykinase family of enzymes. It is expressed in postnatal cells such as mammary epithelium, white and brown adipocytes, skeletal muscle cells and hepatocytes. PCK1 has multiple functions, some of which are cell-specific. In particular, PCK1 has both cataplerotic (Greek: to fill down, or remove) and anaplerotic (to fill up, or replace) activity, where it removes and replaces elements of the TCA cycle. It is also gluconeogenic, and promotes glucose formation via PEP generation. Finally, it is glyceroneogenic, creating glycerol-3-phosphate that is used to reesterify and store just-released free fatty acids in adipocytes. Mouse PCK1 is 622 amino acids (aa) in length. It contains one kinase domain (aa 27-615), and two potential acetylation sites at Lys70 and 71. There are four potential splice forms. Two have alternative start sites at Met460 and Met315, while two others show a deletion of aa 34-546, plus a three aa substitution for aa 85-204, respectively. Over aa 551-622, mouse PCK1 shares 93% and 82% aa identity with rat and human PCK1, respectively.

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