Recombinant Rat PEPCK-C protein (His Tag)

Catalog Number: PDER100177

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

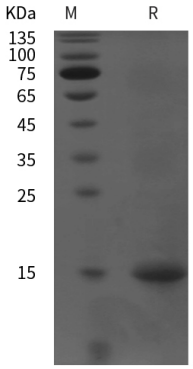
Description

Species	Rat
Source	E.coli-derived Rat PEPCK-C protein Met1-Lys135, with an N-terminal His
Calculated MW	14.7 kDa
Observed MW	15 kDa
Accession	P07379
Bio-activity	Not validated for activity

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 10 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



> 95 % as determined by reducing SDS-PAGE.

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. 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.