Datasheet for ABIN7556447

PCK1 Protein (AA 1-622) (His tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	PCK1
Protein Characteristics:	AA 1-622
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PCK1 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Purpose:	Custom-made recombinat Pck1 Protein expressed in mammalien cells.
Sequence:	MPPQLHNGLD FSAKVIQGSL DSLPQAVRKF VEGNAQLCQP EYIHICDGSE EEYGQLLAHM QEEGVIRKLK KYDNCWLALT DPRDVARIES KTVIITQEQR DTVPIPKTGL SQLGRWMSEE DFEKAFNARF PGCMKGRTMY VIPFSMGPLG SPLAKIGIEL TDSPYVVASM RIMTRMGISV LEALGDGEFI KCLHSVGCPL PLKKPLVNNW ACNPELTLIA HLPDRREIIS FGSGYGGNSL LGKKCFALRI ASRLAKEEGW LAEHMLILGI TNPEGKKKYL AAAFPSACGK TNLAMMNPSL PGWKVECVGD DIAWMKFDAQ GNLRAINPEN GFFGVAPGTS VKTNPNAIKT IQKNTIFTNV AETSDGGVYW EGIDEPLAPG VTITSWKNKE WRPQDAEPCA HPNSRFCTPA SQCPIIDPAW ESPEGVPIEG IIFGGRRPEG VPLVYEALSW QHGVFVGAAM RSEATAAAEH KGKIIMHDPF AMRPFFGYNF GKYLAHWLSM AHRPAAKLPK IFHVNWFRKD KDGKFLWPGF GENSRVLEWM FGRIEGEDSA KLTPIGYIPK ENALNLKGLG GVNVEELFGI SKEFWEKEVE EIDRYLEDQV NTDLPYEIER ELRALKQRIS QM **Sequence without tag. The proposed Purification-Tag is**

Product Details

	based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
Grade:	custom-made

Target Details

Target:	PCK1
Alternative Name:	Pck1 (PCK1 Products)
Background:	Phosphoenolpyruvate carboxykinase, cytosolic [GTP] (PEPCK-C) (EC 4.1.1.32) (Serine-protein kinase PCK1) (EC 2.7.11.-),FUNCTION: Cytosolic phosphoenolpyruvate carboxykinase that catalyzes the reversible decarboxylation and phosphorylation of oxaloacetate (OAA) and acts as the rate-limiting enzyme in gluconeogenesis (PubMed:11916968, PubMed:11792850, PubMed:30193097, PubMed:29230018). Regulates cataplerosis and anaplerosis, the processes that control the levels of metabolic intermediates in the citric acid cycle (PubMed:30193097). At low glucose levels, it catalyzes the cataplerotic conversion of oxaloacetate to phosphoenolpyruvate (PEP), the rate-limiting step in the metabolic pathway that produces glucose from lactate and other precursors derived from the citric acid cycle (PubMed:30193097). At high glucose levels, it catalyzes the anaplerotic conversion of phosphoenolpyruvate to oxaloacetate (PubMed:30193097). Acts as a regulator of formation

Target Details

	and maintenance of memory CD8(+) T-cells: up-regulated in these cells, where it generates phosphoenolpyruvate, via gluconeogenesis (PubMed:29230018). The resultant phosphoenolpyruvate flows to glycogen and pentose phosphate pathway, which is essential for memory CD8(+) T-cells homeostasis (PubMed:29230018). In addition to the phosphoenolpyruvate carboxykinase activity, also acts as a protein kinase when phosphorylated at Ser-90: phosphorylation at Ser-90 by AKT1 reduces the binding affinity to oxaloacetate and promotes an atypical serine protein kinase activity using GTP as donor (By similarity). The protein kinase activity regulates lipogenesis: upon phosphorylation at Ser-90, translocates to the endoplasmic reticulum and catalyzes phosphorylation of INSIG proteins (INSIG1 and INSIG2), thereby disrupting the interaction between INSIG proteins and SCAP and promoting nuclear translocation of SREBP proteins (SREBF1/SREBP1 or SREBF2/SREBP2) and subsequent transcription of downstream lipogenesis-related genes (By similarity). {ECO:0000250|UniProtKB:P35558, ECO:0000269|PubMed:11792850, ECO:0000269|PubMed:11916968, ECO:0000269|PubMed:29230018, ECO:0000269|PubMed:30193097}.
Molecular Weight:	69.4 kDa
UniProt:	Q9Z2V4
Pathways:	Positive Regulation of Peptide Hormone Secretion, Carbohydrate Homeostasis

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months