Datasheet for ABIN7548459

GCK Protein (AA 1-465) (His tag)

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Overview

Quantity:	1 mg
Target:	GCK
Protein Characteristics:	AA 1-465
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This GCK protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat GCK Protein expressed in mammalien cells.
Sequence:	MLDDRARMEA AKKEKVEQIL AEFQLQEEDL KKVMRRMQKE MDRGLRLETH EEASVKMLPT YVRSTPEGSE VGDFLSLDLG GTNFRVMLVK VGEGEEGQWS VKTKHQMYSI PEDAMTGTAE MLFDYISECI SDFLDKHQMK HKKLPLGFTF SFPVRHEDID KGILLNWTKG FKASGAEGNN VVGLLRDAIK RRGDFEMDVV AMVNDTVATM ISCYYEDHQC EVGMIVGTGC NACYMEEMQN VELVEGDEGR MCVNTEWGAF GDSGELDEFL LEYDRLVDES SANPGQQLYE KLIGGKYMGE LVRLVLLRLV DENLLFHGEA SEQLRTRGAF ETRFVSQVES DTGDRKQIYN ILSTLGLRPS TTDCDIVRRA CESVSTRAAH MCSAGLAGVI NRMRESRSED VMRITVGVDG SVYKLHPSFK ERFHASVRRL TPSCEITFIE SEEGSGRGAA LVSAVACKKA CMLGQ **Sequence without tag. The proposed Purification-Tag is 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.**

Product Details

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:	GCK
Alternative Name:	GCK (GCK Products)
Background:	Hexokinase-4 (HK4) (EC 2.7.1.1) (Glucokinase) (Hexokinase type IV) (HK IV) (Hexokinase-D),FUNCTION: Catalyzes the phosphorylation of hexose, such as D-glucose, D-fructose and D-mannose, to hexose 6-phosphate (D-glucose 6-phosphate, D-fructose 6-phosphate and D-mannose 6-phosphate, respectively) (PubMed:7742312, PubMed:11916951, PubMed:15277402, PubMed:17082186, PubMed:18322640, PubMed:19146401, PubMed:25015100, PubMed:8325892). Compared to other hexokinases, has a weak affinity for D-glucose, and is effective only when glucose is abundant (By similarity). Mainly expressed in pancreatic beta cells and the liver and constitutes a rate-limiting step in glucose metabolism in these tissues (PubMed:18322640, PubMed:25015100, PubMed:8325892, PubMed:11916951, PubMed:15277402). Since insulin secretion parallels glucose metabolism and the low glucose affinity of GCK ensures that it can change its enzymatic activity within the physiological range of glucose concentrations, GCK acts as a glucose sensor in the pancreatic beta cell (By similarity). In pancreas, plays an important role in modulating insulin secretion (By similarity). In

Target Details

	liver, helps to facilitate the uptake and conversion of glucose by acting as an insulin-sensitive determinant of hepatic glucose usage (By similarity). Required to provide D-glucose 6-phosphate for the synthesis of glycogen (PubMed:8878425). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (PubMed:7742312). {ECO:0000250|UniProtKB:P17712, ECO:0000250|UniProtKB:P52792, ECO:0000269|PubMed:11916951, ECO:0000269|PubMed:15277402, ECO:0000269|PubMed:17082186, ECO:0000269|PubMed:18322640, ECO:0000269|PubMed:19146401, ECO:0000269|PubMed:25015100, ECO:0000269|PubMed:7742312, ECO:0000269|PubMed:8325892, ECO:0000269|PubMed:8878425}.
Molecular Weight:	52.2 kDa
UniProt:	P35557
Pathways:	MAPK Signaling, Positive Regulation of Peptide Hormone Secretion, Carbohydrate Homeostasis , Cellular Glucan Metabolic Process, Regulation of Carbohydrate Metabolic Process

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