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Datasheet for ABIN3131227

Hexokinase 2 Protein (HK2) (AA 1-917) (Strep Tag)

Overview

Quantity:	1 mg
Target:	Hexokinase 2 (HK2)
Protein Characteristics:	AA 1-917
Origin:	Mouse
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Hexokinase 2 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence: MIASHMIACL FTELNQNVQV KVDQYLYHMR LSDETLLEIS RRFKEMEKG LGATTHPTAA
VKMLPTFVRS TPDGTEHGEF LALDLGGTNF RVLVRVTDN GLQRVEMENQ IYAIPEDIMR
GSGTQLFDHI AECLANFMDK LQIKEKKLPL GFTFSFPCHQ TKLDESFLVS WTKGFKSSGV
EGRDVVDLIR KAIQRRGDFD IDIVAVVNDT VGTMMTCGYD DQNCEIGLIV GTGSNACYME
EMRHIDMVEG DEGRMCINME WGAFGDDGTL NDIRTEFDRE IDMGSLNPGK QLFKEMISGM
YMGELVRLIL VKMAKAELLF QGKLSPELLT TGSFETKDVS DIEDDKDGIQ KAYQILVRLG
LSPLQEDCVA THRICQIVST RSASLCAATL AAVLWRIKEN KGEERLRSTI GVDGSVYKHH
PHFAKRLHKA VRRLLVPDCDV RFLRSEDGSG KGAAMVTAVA YRLADQHRAR QKTLESCLKS
HEQLLEVKRR MKVEMEQGLS KETHEAAPVK MLPTYVCATP DGTEKGDFLA LDLGGTNFRV
LLVRVRNGKR RGVEMHNKIY SIPQEVMHGT GEELFDHIVQ CIADFLEYMG MKGVSLPLGF
TFSFPCQQNS LDQSILLKWT KGFKASGCEG EDVVTLLKEA IRRREEFDLD VVAVVNDTVG
TMMTCGYEDP HCEVGLIVGT GSNACYMEEM RNVELVDGEE GRMCVNMEWG AFGDNGCLDD

LRTVFDVAVD ELSLNPGKQR FEKMISGMYL GEIVRNILID FTKRGLLFRG RISERLKTRG
IFETKFLSQI ESDCLALLQV RAILRHLEGLE STCDDSIIVK EVCTVVARRA AQLCGAGMAA
VVDKIRENRG LDNLKVTGVG DGTLYKLHPH FAKVMHETVR DLAPKCDVSF LESEDGSGKG
AALITAVACR IREAGQR

Sequence without tag. The proposed Strep-Tag is based on experience s 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 in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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 will ensure that you receive a correctly folded protein.

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.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

Product Details

- We use the Expsy's protparam tool to determine the absorption coefficient of each protein.

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): <ol style="list-style-type: none">1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	≥ 80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

Target Details

Target:	Hexokinase 2 (HK2)
Alternative Name:	HK2 (HK2 Products)
Background:	Hexokinase-2 (EC 2.7.1.1) (Hexokinase type II) (HK II),FUNCTION: Catalyzes the phosphorylation of hexose, such as D-glucose and D-fructose, to hexose 6-phosphate (D-glucose 6-phosphate and D-fructose 6-phosphate, respectively) (By similarity). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (By similarity). Plays a key role in maintaining the integrity of the outer mitochondrial membrane by preventing the release of apoptogenic molecules from the intermembrane space and subsequent apoptosis (PubMed:18350175). {ECO:0000250 UniProtKB:P27881, ECO:0000269 PubMed:18350175}.
Molecular Weight:	102.5 kDa
UniProt:	O08528
Pathways:	PI3K-Akt Signaling , Carbohydrate Homeostasis , Warburg Effect

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.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from

Application Details

Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)