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Datasheet for ABIN3134411
NEK1 Protein (AA 1-1203) (Strep Tag)

Overview

Quantity:	1 mg
Target:	NEK1
Protein Characteristics:	AA 1-1203
Origin:	Mouse
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This NEK1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MEKYVRLQKI GEGSFGKAVL VKSTEDGRHY VIKEINISRM SDKERQESRR EVAVLANMKH
PNIVQYKESF EENGSLYIVM DYCEGGDLFK RINAQKGALF QEDQILDWFV QICLALKHVH
DRKILHRDIK SQNIFLTKDG TVQLGDFGIA RVLNSTVELA RTCIGTPYYL SPEICENKPY
NNKSDIWALG CVLYELCTLK HAFEAGNMKN LVLKIISGSF PVPSPHYSYD LRSLLSQLFK
RNPRDRPSVN SILEKGFIAK RIEKFLSPQL IAEEFCLKTL SKFGPQPLPG KRPASGQGVS
SFVPAQKITK PAAKYGVPLT YKKGDKKLL EKKPPPCHKQ AHQIPVKMKN SGEERKKMSE
EAAKKRRLEF IEKEKKQKDQ IRFLKAEQMK RQEKQLERI NRAREQGWRN VLRAGGSGEV
KASFFGIGGA VSPSPCSPRG QYEHYHAIFD QMQLRAEDN EARWKGGIYG RWLPERQKGH
LAVERANQVE EFLQRKREAM QNKARAEGHV VYLARLRQIR LQNFNERQI KAKLRGENKE
ADGTKGQEAT EETDMRLKMM ESLKAQTNAR AAVLKEQLER KRKEAYEREK KVWEEHLVAR
VKSSDVPLPL ELLETGGSPS KQQVKPVISV TSALKEVGLD GSLTDTQEEE MEKSNSAISS
KREILRRLNE NLKAQEDEKE KQHHSWSCET VGHKDEREYE TENAISSDRK KWEMGGQLVI

PLDAVTLDTFSATEKHTVGEVIKLSNNGS PRKVWVGKNPT DSVLKILGEA ELQLQTELE
NTSFKSEVYA EEENYKPLLT EEENLQCISK EINPSATVDS TETKSPKFTE VSPQMSEGNV
EEPDDLETEV LQEPSSTHTD GSLPPVLNDV WTREKEAAKE TELEDKVAVQ QSEVCEDRIP
GNVDQSCCKDQ RDPVDDSPQ SGCDVEKSVQ PESIFQKVVH SKDLNLVQAV HCSPEEPIPI
RSHSDSPPKT KSKNSLLIGL STGLFDANNP KMLRTCSPD LSKLFRTLMD VPTVGDVHQD
SLEIDELEDE PIKEGPSDSE DTVFEETD TD LQELQASMEQ LLREQPGDEY S EEEESVLKS
SDVEQTARGET DAPDEEDNPS SESALNEEWH SDNSDAETTS ECEYDSVFNH LEELRLHLEQ
EMGFKEFFEV YEKVKAIHED EDENIEICST IVENILGNEH QHLYAKILHL VMADGAYQED NDE

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!

Product Details

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.
- We use the Expasy'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®):

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:

NEK1

Alternative Name:

Nek1 ([NEK1 Products](#))

Background:

Serine/threonine-protein kinase Nek1 (EC 2.7.11.1) (Never in mitosis A-related kinase 1) (NimA-related protein kinase 1),FUNCTION: Phosphorylates serines and threonines, but also appears to possess tyrosine kinase activity (PubMed:1382974). Involved in DNA damage checkpoint control and for proper DNA damage repair (PubMed:18843199). In response to injury that includes DNA damage, NEK1 phosphorylates VDAC1 to limit mitochondrial cell death (By similarity). May be implicated in the control of meiosis (PubMed:1382974). Involved in cilium assembly (By similarity). {ECO:0000250|UniProtKB:Q96PY6, ECO:0000269|PubMed:1382974, ECO:0000269|PubMed:18843199}.

Molecular Weight:

136.7 kDa

UniProt:

[P51954](#)

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

Application Details

guarantee though.

Comment:

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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)