Datasheet for ABIN3094032

Nibrin Protein (NBN) (AA 1-754) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	Nibrin (NBN)
Protein Characteristics:	AA 1-754
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Nibrin protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Brand:	AliCE®
Sequence:	MWKLLPAAGP AGGEPYRLLT GVEYVVGRKN CAILIENDQS ISRNHAVLTA NFSVTNLSQT DEIPVLTLKD NSKYGTFVNE EKMQNGFSRT LKSGDGITFG VFGSKFRIEY EPLVACSSCL DVSGKTALNQ AILQLGGFTV NNWTEECTHL VMVSVKVTIK TICALICGRP IVKPEYFTEF LKAVESKKQP PQIESFYPPL DEPSIGSKNV DLSGRQERKQ IFKGKTFIFL NAKQHKKLSS AVVFGGGEAR LITEENEEEH NFFLAPGTCV VDTGITNSQT LIPDCQKKWI QSIMDMLQRQ GLRPIPEAEI GLAVIFMTTK NYCDPQGHPS TGLKTTTPGP SLSQGVSVDE KLMPSAPVNT TTYVADTESE QADTWDLSER PKEIKVSKME QKFRMLSQDA PTVKESCKTS SNNNSMVSNT LAKMRIPNYQ LSPTKLPSIN KSKDRASQQQ QTNSIRNYFQ PSTKKRERDE ENQEMSSCKS ARIETSCSLL EQTQPATPSL WKNKEQHLSE NEPVDTNSDN NLFTDTDLKS IVKNSASKSH AAEKLRSNKK REMDDVAIED EVLEQLFKDT KPELEIDVKV QKQEEDVNVR KRPRMDIETN DTFSDEAVPE SSKISQENEI GKKRELKEDS LWSAKEISNN DKLQDDSEML PKKLLLTEFR

SLVIKNSTSR NPSGINDDYG QLKNFKKFKK VTYPGAGKLP HIIGGSDLIA HHARKNTELE EWLRQEMEVQ NQHAKEESLA DDLFRYNPYL KRRR

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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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 against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).

Product Details

Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	Nibrin (NBN)
Alternative Name:	NBN (NBN Products)
Background:	Nibrin (Cell cycle regulatory protein p95) (Nijmegen breakage syndrome protein 1),FUNCTION: Component of the MRE11-RAD50-NBN (MRN complex) which plays a critical role in the cellular response to DNA damage and the maintenance of chromosome integrity. The complex is involved in double-strand break (DSB) repair, DNA recombination, maintenance of telomere integrity, cell cycle checkpoint control and meiosis. The complex possesses single-strand endonuclease activity and double-strand-specific 3'-5' exonuclease activity, which are provided by MRE11. RAD50 may be required to bind DNA ends and hold them in close proximity. NBN modulate the DNA damage signal sensing by recruiting PI3/PI4-kinase family members ATM, ATR, and probably DNA-PKcs to the DNA damage sites and activating their functions. It can also recruit MRE11 and RAD50 to the proximity of DSBs by an interaction with the histone H2AX. NBN also functions in telomere length maintenance by generating the 3' overhang which serves as a primer for telomerase dependent telomere elongation. NBN is a major player in the control of intra-S-phase checkpoint and there is some evidence that NBN is involved in G1 and G2 checkpoints. The roles of NBS1/MRN encompass DNA damage sensor, signal transducer, and effector, which enable cells to maintain DNA integrity and genomic stability. Forms a complex with RBBP8 to link DNA double-strand break sensing to resection. Enhances AKT1 phosphorylation possibly by association with the mTORC2 complex. {ECO:0000269|PubMed:10888888, ECO:0000269|PubMed:15616588, ECO:0000269|PubMed:19759395, ECO:0000269|PubMed:23762398, ECO:0000269|PubMed:26438602, ECO:0000269|PubMed:9705271}.
Molecular Weight:	85.0 kDa
UniProt:	O60934
Pathways:	DNA Damage Repair, Production of Molecular Mediator of Immune Response

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:	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!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months