

Datasheet for ABIN3094099

NEMF Protein (AA 1-1076) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	NEMF (SDCCAG1)
Protein Characteristics:	AA 1-1076
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This NEMF protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AliCE®
Sequence:	<p>MKSRFSTIDL RAVLAELNAS LLGMRVNNVY DVDNKTYLIR LQKPDFKATL LLESGIRIHT</p> <p>TEFEWPKNMM PSSFAMKCRK HLKSRRLVSA KQLGVDRIVD FQFGSDEAAY HLIELYDRG</p> <p>NIVLTDYEYV ILNILRFRTD EADDVKFAVR ERYPLDHARA AEPLLTLERL TEIVASAPKG</p> <p>ELLKRVLNPL LPYGPALIEH CLENGFSGN VKVDEKLETK DIEKVLVSLQ KAEDYMKTTTS</p> <p>NFSGKGYIIQ KREIKPSLEA DKPVEDILTY EEFHPFLFSQ HSQCPYIEFE SFDKAVDEFY</p> <p>SKIEGQKIDL KALQKEKQAL KKLDNVRKDH ENRLEALQQA QEIDKLKGEL IEMNLQIVDR</p> <p>AIQVVRSA LA NQIDWTEIGL IVKEAQAQGD PVASAIKELK LQTNHVTMLL RNPYLLSEEE</p> <p>DDDVDGDVNV EKNETEPKKG KKKKQKNKQL QKPQKNKPLL VDVLSLSAY ANAKKYYDHK</p> <p>RYAAKKTQKT VEAAEKAFKS AEKKTQTLK EVQTVTSIQK ARKVYWFEEK LWFISSENYL</p> <p>IIGGRDQQQN EIIVKRYLTP GDIYVHADLH GATSCVIKNP TGEPIPPRTL TEAGTMALCY</p> <p>SAAWDARVIT SAWWVYHHQV SKTAPTGEYL TTGSFMIRGK KNFLPPSYLM MGFSFLFKVD</p>

ESCVWRHQGE RKVRVQDEDM ETLASCTSEL ISEEMEQLDG GDTSSDEDKE EHETPVEVEL
MTQVDQEDIT LQSGRDELNE ELIQEESSED EGEYEEVRKD QDSVGEMKDE GEETLNYPDT
TIDLSHLQPQ RSIQKLASKE ESSNSSDSKS QSRRHLSAKE RREMKKKKLP SDSGDLEALE
GKDKEKESTV HIETHQNTSK NVAAVQPMKR GQKSKMKMKM EKYKDQDEED RELIMKLLGS
AGSNKEEK GK KGKKGKTKDE PVKKQPQKPR GGQRVSDNIK KETPFLEVIT HELQDFAVDD
PHDDKEEQDL DQQGNEENLF DSLTGQPHPE DVLLFAIPIC APYTTMTNYK YKVKLTPGVQ
KKGKAAKTAL NSFMHSKEAT AREKDLFRSV KTDLSRNIP GKVKSAPNL LNVKRK

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.

Product Details

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

Target:	NEMF (SDCCAG1)
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Alternative Name:	NEMF (SDCCAG1 Products)
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Background:	<p>Ribosome quality control complex subunit NEMF (Antigen NY-CO-1) (Nuclear export mediator factor) (Serologically defined colon cancer antigen 1),FUNCTION: Key component of the ribosome quality control complex (RQC), a ribosome-associated complex that mediates the extraction of incompletely synthesized nascent chains from stalled ribosomes as well as their ubiquitin-mediated proteasomal degradation (PubMed:25578875, PubMed:32726578, PubMed:33406423, PubMed:33909987). Thereby, frees 60S subunit ribosomes from the stalled translation complex and prevents the accumulation of nascent polypeptide chains that are potentially toxic for the cell (PubMed:25578875, PubMed:33406423, PubMed:33909987). Within the RQC complex, NEMF specifically binds stalled 60S ribosomal subunits by recognizing an exposed, nascent chain-conjugated tRNA moiety and promotes the recruitment of LTN1 to stalled 60S subunits (PubMed:25578875). Following binding to stalled 60S ribosomal subunits, NEMF mediates CAT tailing by recruiting alanine-charged tRNA to the A-site and directing the elongation of stalled nascent chains independently of mRNA or 40S subunits, leading to non-templated C-terminal alanine extensions (CAT tails) (PubMed:33406423, PubMed:33909987). Mainly recruits alanine-charged tRNAs, but can also other amino acid-charged tRNAs (PubMed:33406423, PubMed:33909987). CAT tailing is required to promote ubiquitination of stalled nascent chains by different E3 ubiquitin-protein ligases (PubMed:33909987). In the canonical RQC pathway (RQC-L), CAT tailing facilitates LTN1-dependent ubiquitination by exposing lysine residues that would otherwise remain buried in the ribosomal exit tunnel (By similarity). In the alternative RQC pathway (RQC-C) CAT tailing creates an C-degron mainly composed of alanine that is recognized by the CRL2(KLHDC10) and RCHY1/PIRH2 E3 ligases, leading to ubiquitination and degradation of stalled nascent chains (PubMed:33909987). NEMF</p>
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Target Details

may also indirectly play a role in nuclear export (PubMed:16103875).
{ECO:0000250|UniProtKB:Q12532, ECO:0000269|PubMed:16103875,
ECO:0000269|PubMed:25578875, ECO:0000269|PubMed:32726578,
ECO:0000269|PubMed:33406423, ECO:0000269|PubMed:33909987}.

Molecular Weight: 123.0 kDa

UniProt: [O60524](#)

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 *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