

Datasheet for ABIN3094080

**NFATC4 Protein (AA 1-902) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	NFATC4
Protein Characteristics:	AA 1-902
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This NFATC4 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Sequence:	MGAASCEDEE LEFKLVFGEE KEAPPLGAGG LGEELDSEDA PPCCRLALGE PPPYGAAPIG IPRPPPPRPG MHSPPPRPAP SPGTWESQPA RSVRLGGPGG GAGGAGGGRV LECPSIRITS ISPTPEPPAA LEDNPDAWGD GSPRDYPPPE GFGGYREAGG QGGGAFFSPS PGSSSLSSWS FFSDASDEAA LYAACDEVES ELNEAASRFG LGSPLPSRA SPRPWTPEDP WSLYGPSPGG RGPEDSWLLL SAPGPTPASP RPASPCGKRR YSSSGTPSSA SPALSRRGSL GEEGSEPPPP PPLPLARDPG SPGPFDYVGA PPAESIPQKT RRTSSEQAVA LPRSEEPASC NGKLPLGAEE SVAPPGGSRK EVAGMDYLAV PSPLAWSKAR IGGHSPIFRT SALPPLDWPL PSQYEQLER IEVQPRAHHR AHYETEGSRG AVKAAPGGHP VVKLLGYSEK PLTLQMFIGN ADERNLRPHA FYQVHRITGK MVATASYEAV VSGTKVLEMT LLPENNMAAN IDCAGILKLR NSDIELRKGE TDIGRKNTRV RLVFRVHVPQ GGGKVVSQQA ASVPIECSQR SAQELPQVEA YSPSACSVRG GEELVLTGSN FLPDSKVFI ERGPDGKLQW EEEATVNRLQ SNEVTLTLTV PEYSNKRVS RVQVYFYVSN GRRKRSPTQS FRFLPVICKE EPLPDSSLRG FPSASATPFG TDMDFSPPRP
-----------	--

PYPSYPHEDP ACETPYLSEG FGYGMPPLYP QTGPPPSYRP GLRMFPETRG TTGCAQPPAV  
SFLPRPFPSD PYGGRGSSFS LGLPFSPAP FRPPPLPASP PLEGPFPSQS DVHPLPAEGY  
NKVGPGYGPGEAPEQEKSRR GGYSSGFRDS VPIQGITLEE VSEIIGRDLS GFPAPPGEEP PA

**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.
- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

## Product Details

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)
Grade:	Crystallography grade

## Target Details

Target:	NFATC4
Alternative Name:	NFATC4 ( <a href="#">NFATC4 Products</a> )
Background:	<p>Nuclear factor of activated T-cells, cytoplasmic 4 (NF-ATc4) (NFATc4) (T-cell transcription factor NFAT3) (NF-AT3),FUNCTION: Ca(2+)-regulated transcription factor that is involved in several processes, including the development and function of the immune, cardiovascular, musculoskeletal, and nervous systems (PubMed:7749981, PubMed:11514544, PubMed:11997522, PubMed:17875713, PubMed:17213202, PubMed:18668201, PubMed:25663301). Involved in T-cell activation, stimulating the transcription of cytokine genes, including that of IL2 and IL4 (PubMed:7749981, PubMed:18668201, PubMed:18347059). Along with NFATC3, involved in embryonic heart development. Following JAK/STAT signaling activation and as part of a complex with NFATC3 and STAT3, binds to the alpha-beta E4 promoter region of CRYAB and activates transcription in cardiomyocytes (By similarity). Involved in mitochondrial energy metabolism required for cardiac morphogenesis and function (By similarity). Transactivates many genes involved in the cardiovascular system, including AGTR2, NPPB/BNP (in synergy with GATA4), NPPA/ANP/ANF and MYH7/beta-MHC (By similarity). Involved in the regulation of adult hippocampal neurogenesis. Involved in BDNF-driven pro-survival signaling in hippocampal adult-born neurons. Involved in the formation of long-term spatial memory and long-term potentiation (By similarity). In cochlear nucleus neurons, may play a role in deafferentation-induced apoptosis during the developmental critical period, when auditory neurons depend on afferent input for survival (By similarity). Binds to and activates the BACE1/Beta-secretase 1 promoter, hence may regulate the proteolytic processing of the amyloid precursor protein (APP) (PubMed:25663301). Plays a role in adipocyte</p>

## Target Details

differentiation (PubMed:11997522). May be involved in myoblast differentiation into myotubes (PubMed:17213202). Binds the consensus DNA sequence 5'-GGAAAAT-3' (Probable). In the presence of CREBBP, activates TNF transcription (PubMed:11514544). Binds to PPARG gene promoter and regulates its activity (PubMed:11997522). Binds to PPARG and REG3G gene promoters (By similarity). {ECO:0000250|UniProtKB:D3Z9H7, ECO:0000250|UniProtKB:Q8K120, ECO:0000269|PubMed:11514544, ECO:0000269|PubMed:11997522, ECO:0000269|PubMed:17213202, ECO:0000269|PubMed:17875713, ECO:0000269|PubMed:18347059, ECO:0000269|PubMed:18668201, ECO:0000269|PubMed:25663301, ECO:0000269|PubMed:7749981, ECO:0000305}.

Molecular Weight: 95.4 kDa

UniProt: [Q14934](#)

Pathways: [RTK Signaling](#), [WNT Signaling](#)

## 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. If you have a special request, please contact us.

## Handling

Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

## Images



**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process