

Datasheet for ABIN3094083

**NFKB1 Protein (AA 1-433) (His tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	NFKB1
Protein Characteristics:	AA 1-433
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NFKB1 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)

## Product Details

Sequence:	MAEDDPYLGR PEQMFHLDPS LTHTIFNPEV FQPQMALPTD GPYLQILEQP KQRGFRFRYV CEGPSHGGLP GASSEKNKKS YPQVKICNYV GPAKVIVQLV TNGKNIHLHA HSLVGKHCD GICTVTAGPK DMVVG FANLG ILHVTKKKVF ETLEARMTEA CIRGYNPGLL VHPDLAYLQA EGGGDRQLGD REKELIRQAA LQQTKEMDLS VVRLMFTAFL PDSTGSFTRR LEPVVSDAIY DSKAPNASNL KIVRMDRTAG CVTGGEEIYL LCDKVQKDDI QIRFYEEEEEN GGVWEGFGDF SPTDVHRQFA IVFKTPKYD INITKPASVF VQLRRKSDLE TSEPKPFLYY PEIKDKEEVQ RKRQKLMPNF SDSFGGGSGA GAGGGGMFGS GGGGGGTGST GPGYSFPHYG FPTYGGITFH PGTTKSNAGM KHG
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**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

Characteristics:	<ul style="list-style-type: none"><li>Made in Germany - from design to production - by highly experienced protein experts.</li><li>Human NFKB1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process</li></ul>
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to ensure crystallization grade.

- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the ExPASy's protparam tool to determine the absorption coefficient of each protein.

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### Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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.

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### Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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### Sterility:

0.22 µm filtered

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### Endotoxin Level:

Protein is endotoxin free.

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### Grade:

Crystallography grade

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## Target Details

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### Target:

NFKB1

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### Alternative Name:

NFKB1 ([NFKB1 Products](#))

## Target Details

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**Background:** NF-kappa-B is a pleiotropic transcription factor present in almost all cell types and is the endpoint of a series of signal transduction events that are initiated by a vast array of stimuli related to many biological processes such as inflammation, immunity, differentiation, cell growth, tumorigenesis and apoptosis. NF-kappa-B is a homo- or heterodimeric complex formed by the Rel-like domain-containing proteins RELA/p65, RELB, NFKB1/p105, NFKB1/p50, REL and NFKB2/p52 and the heterodimeric p65-p50 complex appears to be most abundant one. The dimers bind at kappa-B sites in the DNA of their target genes and the individual dimers have distinct preferences for different kappa-B sites that they can bind with distinguishable affinity and specificity. Different dimer combinations act as transcriptional activators or repressors, respectively. NF-kappa-B is controlled by various mechanisms of post-translational modification and subcellular compartmentalization as well as by interactions with other cofactors or corepressors. NF-kappa-B complexes are held in the cytoplasm in an inactive state complexed with members of the NF-kappa-B inhibitor (I-kappa-B) family. In a conventional activation pathway, I-kappa-B is phosphorylated by I-kappa-B kinases (IKKs) in response to different activators, subsequently degraded thus liberating the active NF-kappa-B complex which translocates to the nucleus. NF-kappa-B heterodimeric p65-p50 and RelB-p50 complexes are transcriptional activators. The NF-kappa-B p50-p50 homodimer is a transcriptional repressor, but can act as a transcriptional activator when associated with BCL3. NFKB1 appears to have dual functions such as cytoplasmic retention of attached NF-kappa-B proteins by p105 and generation of p50 by a cotranslational processing. The proteasome-mediated process ensures the production of both p50 and p105 and preserves their independent function, although processing of NFKB1/p105 also appears to occur post-translationally. p50 binds to the kappa-B consensus sequence 5'-GGRNNYYCC-3', located in the enhancer region of genes involved in immune response and acute phase reactions. In a complex with MAP3K8, NFKB1/p105 represses MAP3K8-induced MAPK signaling, active MAP3K8 is released by proteasome-dependent degradation of NFKB1/p105. {ECO:0000269|PubMed:15485931}.

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**Molecular Weight:** 48.5 kDa Including tag.

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**UniProt:** [P19838](#)

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**Pathways:** [p53 Signaling](#), [NF-kappaB Signaling](#), [RTK Signaling](#), [TCR Signaling](#), [TLR Signaling](#), [Fc-epsilon Receptor Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Activation of Innate immune Response](#), [Myometrial Relaxation and Contraction](#), [Regulation of Carbohydrate Metabolic Process](#), [Hepatitis C](#), [Toll-Like Receptors Cascades](#), [BCR Signaling](#), [S100 Proteins](#)

## 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:	In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

## Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
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