

Datasheet for ABIN7563009
NFKB1 Protein (AA 1-971) (His tag)



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Overview

Quantity:	1 mg
Target:	NFKB1
Protein Characteristics:	AA 1-971
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NFKB1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat Nfkb1 Protein expressed in mammalien cells.
Sequence:	MADDDPYGTG QMFHLNTALT HSIFNAELYS PEIPLSTDGP YLQILEQPKQ RGFRRYVCE GPSHGGLPGA SSEKNKKSYP QVKICNYVGP AKVIVQLVTN GKNIHHLAHS LVGKHCEDGV CTVTAGPKDM VVGFANLIL HVTKKKFET LEARMTEACI RGYNPGLLVH SDLAYLQAEQ GGDRQLTDRE KEIRQAAVQ QTKEMDLSV RLMFTAFLPD STGSFTRRLE PVVSDAIYDS KAPNASNLKI VRMDRTAGCV TGGEEIYLLC DKVQKDDIQI RFYEEEEENG VWEGFGDFSP TDVHRQFAIV FKTPKYKDVN ITKPASVFVQ LRRKSDLETS EPKPFLYYPE IKDKEEVQRK RQKLMPNFSD SFGGGSGAGA GGGGMFGSGG GGGSTGSPGP GYGYSNYGFP PYGGITFHPG VTKSNAGVTH GTINTKFKNG PKDCAKSDDE ESLTLPEKET EGEGPSLPMA CTKTEPIALA STMEDKEQDM GFQDNLFLEK ALQLARRHAN ALFDYAVTGD VKMLLAVQRH LTAVQDENGD SVLHLAIIHL HAQLVRDLLE VTSGSLISDDI INMRNDLYQT PLHLAVITKQ EDVVEDLLRV GADLSLLDRW GNSVLHLLAAK EGHDRILSIL LKSRKAAPLI DHPNGEGLNA IHIAVMSNSL

Product Details

PCLLLLVAAG AEVNAQEQKS GRTALHLAVE YDNISLAGCL LLEGDAHVDS TTYDGTTPH
IAAGRGSTRL AALLKAAGAD PLVENFEPLY DLDDSWEKAG EDEGVVPGTT PLDMAANWQQ
FDILNGKPYE PVFTSDDILP QGDMKQLTED TRLQLCKLLE IPDPDKNWAT LAQKLGLGIL
NNAFRLSPAP SKTLMADNYEV SGGTIKELME ALQQMGYTEA IEVIQAAFRT PATTASSPVT
TAQVHCLPLS SSSTRQHIDE LRSDSVCDG GVETSFRKLS FTESLTGDSP LLSLNKMPHG
YGQEGPIEGK | **Sequence without tag. The proposed Purification-Tag is based on experiences 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 to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- 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.

If you are not interested in a full length protein, please contact us for individual protein fragments.

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.

Purity:

> 90 % as determined by Bis-Tris Page, Western Blot

Grade:

custom-made

Target Details

Target:

NFKB1

Alternative Name:

Nfkb1 ([NFKB1 Products](#))

Background:

Nuclear factor NF-kappa-B p105 subunit (DNA-binding factor KBF1) (EBP-1) (NF-kappa-B1 p84/NF-kappa-B1 p98) (Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1) [Cleaved into: Nuclear factor NF-kappa-B p50 subunit],FUNCTION: 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. Plays a role in the regulation of apoptosis. 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:11970948, ECO:0000269|PubMed:18270204, ECO:0000269|PubMed:2203532, ECO:0000269|PubMed:7530332, ECO:0000269|PubMed:9384558, ECO:0000269|PubMed:9450761}, FUNCTION: [Nuclear factor NF-kappa-B p105 subunit]: P105 is the precursor of the active p50 subunit (Nuclear factor NF-kappa-B p50 subunit) of the nuclear factor NF-kappa-B. Acts as a cytoplasmic retention of attached NF-kappa-B proteins by p105. {ECO:0000250|UniProtKB:P19838}, FUNCTION: [Nuclear factor NF-kappa-B p50 subunit]: Constitutes the active form, which associates with RELA/p65 to form the NF-kappa-B p65-p50 complex to form a transcription factor. Together with RELA/p65, 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. {ECO:0000250|UniProtKB:P19838}, FUNCTION: [Isoform 3]: Isoform 3 (p98) (but not p84 or p105) acts as a transactivator of NF-kappa-B-regulated gene expression. {ECO:0000269|PubMed:7969179}, FUNCTION: [Isoform 5]: Act as

Target Details

inhibitors of transactivation of p50 NF-kappa-B subunit, probably by sequestering it in the cytoplasm. {ECO:0000269|PubMed:1339305}., FUNCTION: [Isoform 6]: Act as inhibitors of transactivation of p50 NF-kappa-B subunit, probably by sequestering it in the cytoplasm. {ECO:0000269|PubMed:8183915}., FUNCTION: [Isoform 7]: Act as inhibitors of transactivation of p50 NF-kappa-B subunit, probably by sequestering it in the cytoplasm. {ECO:0000269|PubMed:8183915}.

Molecular Weight: 105.6 kDa

UniProt: [P25799](#)

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.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition 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: 12 months