



### NFKB1 Antibody (S932) Blocking Peptide

Synthetic peptide Catalog # BP1980c

### **Specification**

NFKB1 Antibody (S932) Blocking Peptide - Product Information

Primary Accession P19838

NFKB1 Antibody (\$932) Blocking Peptide - Additional Information

**Gene ID 4790** 

#### **Other Names**

Nuclear factor NF-kappa-B p105 subunit, DNA-binding factor KBF1, EBP-1, Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, Nuclear factor NF-kappa-B p50 subunit, NFKB1

### Target/Specificity

The synthetic peptide sequence used to generate the antibody <a href=/products/AP1980c>AP1980c</a> was selected from the S932 region of human NFKB1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

### **Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

### **Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

### **Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

NFKB1 Antibody (S932) Blocking Peptide - Protein Information

# NFKB1 Antibody (S932) Blocking Peptide - Background

NFKB1 is a 105 kD protein which can undergo cotranslational processing by the 26S proteasome to produce a 50 kD protein. The 105 kD protein is a Rel protein-specific transcription inhibitor and the 50 kD protein is a DNA binding subunit of the NF-kappa-B (NFKB) protein complex. NFKB is a transcription regulator that is activated by various intra- and extra-cellular stimuli such as cytokines, oxidant-free radicals, ultraviolet irradiation, and bacterial or viral products. Activated NFKB translocates into the nucleus and stimulates the expression of genes involved in a wide variety of biological functions. Inappropriate activation of NFKB has been associated with a number of inflammatory diseases while persistent inhibition of NFKB leads to inappropriate immune cell development or delayed cell growth.

## NFKB1 Antibody (S932) Blocking Peptide - References

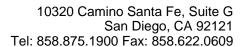
Legembre, P., et al., J. Biol. Chem. 279(45):46742-46747 (2004).Imamura, R., et al., J. Biol. Chem. 279(45):46415-46423 (2004).Hung, J.H., et al., J. Biol. Chem. 279(45):46384-46392 (2004).Binnicker, M.J., et al., Infect. Immun. 72(11):6408-6417 (2004).Zhang, H., et al., J. Biol. Chem. 279(43):44955-44965 (2004).



#### Name NFKB1

#### **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. In a complex with MAP3K8, NFKB1/p105 represses MAP3K8-induced MAPK signaling; active MAP3K8 is released by proteasome-dependent degradation of NFKB1/p105.

### **Cellular Location**

Nucleus. Cytoplasm. Note=Nuclear, but also found in the cytoplasm in an inactive form complexed to an inhibitor (I- kappa-B)

## NFKB1 Antibody (S932) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

• Blocking Peptides