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NFkB p50 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody
Catalog # ABV11528

Specification

NFkB p50 Polyclonal Antibody - Product Information

Application	**WB**
Primary Accession	P19838
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**105356**

NFkB p50 Polyclonal Antibody - 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
NFkB p50

Formulation
100 µg (0.5 mg/ml) rabbit anti-NFkB p50 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Background Descriptions

Precautions
NFkB p50 Polyclonal Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

NFkB p50 Polyclonal Antibody - Protein Information

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

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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
[Nuclear factor NF-kappa-B p105 subunit]: Cytoplasm

NFkB p50 Polyclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

NFkB p50 Polyclonal Antibody - Images

NFkB p50 Polyclonal Antibody - Background

Nuclear factor kappa B (NFkB) was identified as a sequence specific transcriptional activator that binds to the intronic enhancer of kappa light chain gene in B lymphocytes. NFkB is a heterodimer that consists of a 50 kDa DNA binding subunit (p50) and a 65 kDa transactivation subunit (p65/RelA). Both of these subunits exhibit sequence homology to the protooncogene c-Rel. The p50 has an isoform called p49/p52, and both proteins are derived from the amino-terminal of precursor protein p105 and p100. The p50/p65 heterodimer remains in the cytosol in an inactive form as a complex with its inhibitor, IkB. Upon stimulation of cells by a wide variety of stimuli such as lipopolysaccharide (LPS), pro-inflammatory cytokines (IL-1 & TNF, etc.), and viral infection, IkB is phosphorylated and degraded by proteosome. The active NFkB heterodimer is translocated into the nucleus and induces gene expression.