

# NFκB-p105 Polyclonal Antibody

Catalog # AP71278

## Product Information

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<b>Application</b>	WB, IHC-P, IP
<b>Primary Accession</b>	<a href="#">P19838</a>
<b>Reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	105356

## Additional Information

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<b>Gene ID</b>	4790
<b>Other Names</b>	NFKB1; 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
<b>Dilution</b>	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunoprecipitation: 2-5 ug/mg lysate. ELISA: 1/10000. Not yet tested in other applications. IHC-P~~N/A IP~~N/A
<b>Format</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
<b>Storage Conditions</b>	-20°C

## Protein Information

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<b>Name</b>	NFKB1
<b>Function</b>	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

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

## Background

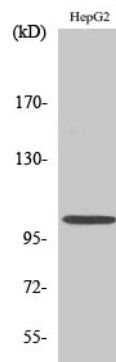
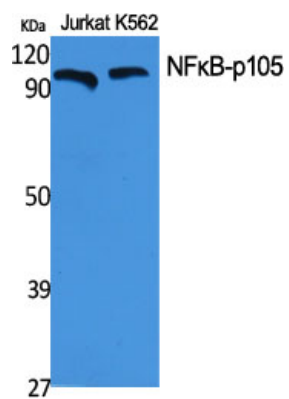
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NF- $\kappa$ B is a pleiotropic transcription factor present in almost all cell types and is the endpoint of a series of signal transduction events that are initiated by a vast array of stimuli related to many biological processes such as inflammation, 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.

## Images

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Western Blot analysis of various cells using NF $\kappa$ B-p105  
Polyclonal Antibody diluted at 1 : 2000



Western Blot analysis of COLO205 cells using NFκB-p105  
 Polyclonal Antibody diluted at 1 : 2000

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.