

35-1016: Polyclonal Antibody to NFkB-p105/p50(Phospho-Ser337)

Clonality :	Polyclonal
Application :	IHC,WB,IF
Reactivity :	Rat,Mouse,Human
Gene :	NF-kB1
Gene ID :	4790
Uniprot ID :	P19838
Format :	Purified
Alternative Name :	p50, KBF1, NF-kB1, NFKB-p50, NFkappaB
Isotype :	Rabbit IgG
Immunogen Information :	Peptide sequence around phosphorylation site of serine 337(R-K-S(p)-D-L) derived from Human NFkB-p105/p50.

Description

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'-GGRNYYCC-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. Beg A.A., Baldwin A.S. Jr. Oncogene 9:1487-1492(1994) Guizani-Tabbane L., Ben-Aissa K., Belghith M., Sassi A., Dellagi K. Infect. Immun. 72:2582-2589(2004) Beinke S., Robinson M.J., Hugunin M., Ley S.C. Mol. Cell. Biol. 24:9658-9667(2004)

Product Info

Amount :	50 µl / 100 µl
Content :	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage condition :	Store the antibody at 4°C, stable for 6 months. For long-term storage, store at -20°C. Avoid repeated freeze and thaw cycles.

Application Note

Predicted MW: 50,120kd, Western blotting: 1:500, Immunohistochemistry: 1:50~1:100, Immunofluorescence: 1:100~1:200

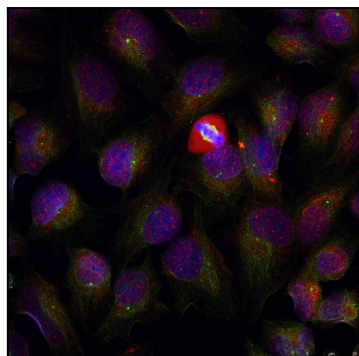


Figure 1: Immunofluorescence staining of methanol-fixed HeLa cells using NF-κB p105/p50 (phospho-Ser337) antibody (35-1016, Red).

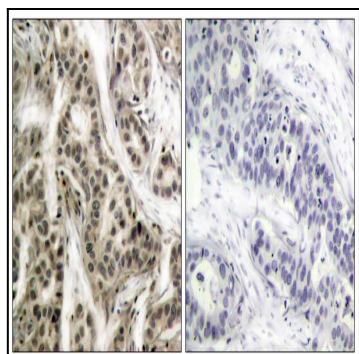


Figure 2: Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using NF-κB p105/p50 (phospho-Ser337) antibody (35-1016).

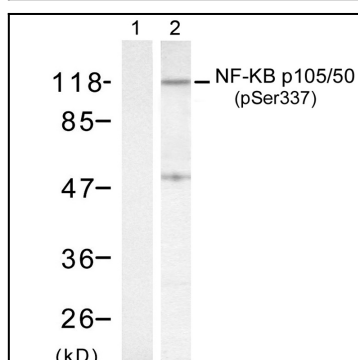


Figure 3: Western blot analysis of extract from HeLa cells, using NF-κB p105/p50 (phospho-Ser337) antibody (35-1016, Lane 1 and 2).

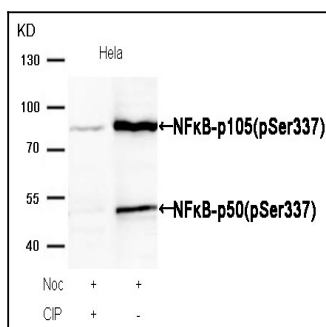


Figure 4: Western blot analysis of extracts from HeLa cells, treated with Noc or calf intestinal phosphatase (CIP), using NF-κB p105/p50 (Phospho-Ser337) Antibody 35-1016.