

# Immunotag™ NFκB-p105 Polyclonal Antibody

| Antibody Specification |                                                                                                                                                                  |
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| Catalog No.            | ITT5109                                                                                                                                                          |
| Product Description    | Immunotag™ NFκB-p105 Polyclonal Antibody                                                                                                                         |
| Size                   | 50 µg, 100 µg                                                                                                                                                    |
| Conjugation            | HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 647                                                      |
| IMPORTANT NOTE         | This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled or returned and is not eligible for return. |
| Target Protein         | NFκB p105                                                                                                                                                        |
| Clonality              | Polyclonal                                                                                                                                                       |
| Storage/Stability      | -20°C/1 year                                                                                                                                                     |
| Application            | WB,IHC-p,ELISA                                                                                                                                                   |
| Recommended Dilution   | Western Blot: 1/500 - 1/2000. IHC-p: 1:100-300 ELISA: 1/20000. Not yet tested in other applications.                                                             |
| Concentration          | 1 mg/ml                                                                                                                                                          |
| Reactive Species       | Human                                                                                                                                                            |
| Host Species           | Rabbit                                                                                                                                                           |
| Immunogen              | Synthesized peptide derived from NFκB-p105 . at AA range: 840-920                                                                                                |
| Specificity            | NFκB-p105 Polyclonal Antibody detects endogenous levels of NFκB-p105 protein.                                                                                    |
| Purification           | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific resin.                                                |
| Form                   | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.                                                                                          |
| Gene Name              | NFKB1                                                                                                                                                            |
| Accession No.          | P19838 P25799                                                                                                                                                    |
| Alternate Names        | NFKB1; Nuclear factor NF-kappa-B p105 subunit; DNA-binding factor KBF1; EBP-1; Nuclear factor of kappa enhancer in B-cells 1                                     |

Antibody Specification

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| Description              | nuclear factor kappa B subunit 1(NFKB1) Homo sapiens This gene encodes a 105 kD protein which can be processed by the 26S proteasome to produce a 50 kD protein. The 105 kD protein is a Rel protein-specific inhibitor and the 50 kD protein is a DNA binding subunit of the NF-kappa-B (NFKB) protein complex. NF-kappa-B is a transcriptional regulator that is activated by various intra- and extra-cellular stimuli such as cytokines, oxidant-free radicals, ionizing radiation, and bacterial or viral products. Activated NFKB translocates into the nucleus and stimulates transcription of genes involved in a wide variety of biological functions. Inappropriate activation of NFKB has been associated with various inflammatory diseases while persistent inhibition of NFKB leads to inappropriate immune cell development and growth. Alternative splicing results in multiple transcript variants encoding different isoforms. |
| Cell Pathway/Category    | MAPK_ERK_Growth,MAPK_G_Protein,Chemokine,Apoptosis_Inhibition,Apoptosis_Mitochondrial,Apoptosis_Regulation,like receptor,RIG-I-like receptor,Cytosolic DNA-sensing pathway,T_Cell_Receptor,B_Cell_Antigen,Neurotrophin,Adipocytokine,Epithelial cell signaling in Helicobacter pylori infection,Pathways in cancer,Pancreatic cancer,Prostate cancer,Chronic myeloid leukemia,Acute myeloid leukemia,lung cancer,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Protein Expression       | Muscle,Rectum tumor,Uterus,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Subcellular Localization | nucleus,nucleoplasm,cytoplasm,mitochondrion,cytosol,I-kappaB/NF-kappaB complex,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| Protein Function | <p>domain:Glycine-rich region (GRR) appears to be a critical element in the generation of p50.,domain:The might be involved in cytoplasmic retention, inhibition of DNA-binding, and transcription activation.,function:pleiotropic transcription factor which is present in almost all cell types and is involved in many biological processes including inflammation, immunity, differentiation, cell growth, tumorigenesis and apoptosis. NF-kappa-B is a homodimeric complex formed by the Rel-like domain-containing proteins RELA/p65, RELB, NFKB1/p105, NFKB1/p50, and the heterodimeric p65-p50 complex appears to be most abundant one. The dimers bind at kappa-B sites to regulate target genes and the individual dimers have distinct preferences for different kappa-B sites that they can 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 complex is sequestered in the cytoplasm in an inactive state complexed with members of the NF-kappa-B inhibitor (I-kappa-B) family. In the activation pathway, I-kappa-B is phosphorylated by I-kappa-B kinases (IKKs) in response to different activating stimuli and degraded thus liberating the active NF-kappa-B complex which translocates to the nucleus. NF-kappa-B p50 and RelB-p50 complexes are transcriptional activators. The NF-kappa-B p50-p50 homodimer is a transcriptional repressor and can act as a transcriptional activator when associated with BCL3. NFKB1 appears to have dual functions: cytoplasmic retention of attached NF-kappa-B proteins by p105 and generation of p50 by a cotranslational processing. The cotranslational mediated process ensures the production of both p50 and p105 and preserves their independent functions. The processing of NFKB1/p105 also appears to occur post-translationally. p50 binds to the kappa-B consensus sequence and is located in the enhancer region of genes involved in immune response and acute phase reactions. In a negative feedback loop, NFKB1/p105 represses MAP3K8-induced MAPK signaling; active MAP3K8 is released by proteasome-dependent processing of NFKB1/p105.,induction:By phorbol ester and TNF-alpha.,PTM:Phosphorylation at 'Ser-903' and 'Ser-907' and ubiquitin-mediated proteolytic processing in response to TNF-alpha stimulation. Phosphorylation at 'Ser-927' and 'Ser-932' and BTRC/BTRCP-mediated proteolysis.,PTM:Polyubiquitination seems to allow p105 processing.,PTM:S-nitrosylation affects DNA binding.,PTM:While translation occurs, the particular unfolded structure after the GRR repeat is required for the generation of p50 making it an acceptable substrate for the proteasome. This process is known as cotranslational processing. The processed form is active and the unprocessed form acts as an inhibitor (I kappa B-like), being able to form complexes with NF-kappa B, trapping it in the cytoplasm. Complete folding of the region downstream of the GRR precludes processing.,similarity:Contains 1 death domain.,similarity:Contains 1 RHD (Rel-like) domain.,similarity:Contains 1 ANK repeats.,subcellular location:Nuclear, but also found in the cytoplasm in an inactive form complexed with I-kappa-B),subunit:Component of the NF-kappa-B p65-p50 complex. Component of the NF-kappa-B p65-p50 complex. Homodimer; component of the NF-kappa-B p50-p50 complex. Component of the NF-kappa-B p105-p50 complex. Component of the NF-kappa-B p50-c-Rel complex. Component of a complex consisting of the NF-kappa-B p50-p50 homodimer and p105. Interacts with MAP3K8. NF-kappa-B p50 subunit interacts with NCOA3 coactivator, which may coactivate NF-kappa-B dependent expression via its histone acetyltransferase activity. Interacts with DSIPI; this interaction prevents NF-kappa-B translocation and DNA-binding. Interacts with SPAG9 and UNC5CL. NFKB1/p105 interacts with CFLAR; this interaction prevents p105 processing into p50. NFKB1/p105 forms a ternary complex with MAP3K8 and TNIP2. Interacts with TNIP2; this prevents processing of p105 to p50. NFKB1/p50 interacts with NFKBIE. NFKB1/p50 interacts with NFKBID. NFKB1/p50 subunit interacts with NFKBID.,</p> |
| Usage            | For Research Use Only! Not for diagnostic or therapeutic procedures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |