

## ARG51664 anti-NFκB p65 phospho (Thr505) antibody

Package: 100 µl, 50 µl  
Store at: -20°C

### Summary

|                     |   |
|---------------------|---|
| Product Description | Rabbit Polyclonal antibody recognizes NFκB p65 phospho (Thr505)   |
| Tested Reactivity   | Hu, Ms, Rat   |
| Tested Application  | IHC-P, WB   |
| Host                | Rabbit  |
| Clonality           | Polyclonal  |
| Isotype             | IgG   |
| Target Name         | NFκB p65  |
| Species             | Human   |
| Immunogen           | Peptide sequence around phosphorylation site of threonine 505 (L-V-T(p)-G-A) derived from Human NFκB-p65.   |
| Conjugation         | Un-conjugated   |
| Alternate Names     | Nuclear factor NF-kappa-B p65 subunit; Nuclear factor of kappa light polypeptide gene enhancer in B-cells 3; NFκB3; p65; Transcription factor p65 |

### Application Instructions

| Application table | Application  | Dilution       |
|-------------------|--|----------------|
|                   | IHC-P  | 1:50 - 1:100   |
|                   | WB   | 1:500 - 1:1000 |
| Application Note  | * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist. |                |

### Properties

|                     |   |
|---------------------|---|
| Form                | Liquid  |
| Purification        | Antibodies were produced by immunizing rabbits with KLH-conjugated synthetic phosphopeptide. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. In addition, non-phospho specific antibodies were removed by chromatography using non-phosphopeptide.                     |
| Buffer              | PBS (without Mg <sup>2+</sup> and Ca <sup>2+</sup> , pH 7.4), 150mM NaCl, 0.02% Sodium azide and 50% Glycerol.  |
| Preservative        | 0.02% Sodium azide  |
| Stabilizer          | 50% Glycerol  |
| Concentration       | 1 mg/ml   |
| Storage instruction | For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use. |

Note For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

|                |  |
|----------------|--|
| Database links | <a href="#">GeneID: 19697 Mouse</a><br><a href="#">GeneID: 5970 Human</a><br><a href="#">Swiss-port # Q04206 Human</a><br><a href="#">Swiss-port # Q04207 Mouse</a>  |
| Gene Symbol    | RELA   |
| Gene Full Name | v-rel avian reticuloendotheliosis viral oncogene homolog A   |
| Background     | NFkB is a ubiquitous transcription factor involved in several biological processes. It is held in the cytoplasm in an inactive state by specific inhibitors. Upon degradation of the inhibitor, NF-kappa-B moves to the nucleus and activates transcription of specific genes. NF-kappa-B is composed of NFKB1 or NFKB2 bound to either REL, RELA, or RELB. The most abundant form of NF-kappa-B is NFKB1 complexed with the product of this gene, RELA. Four transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2011]  |
| Function       | NFkB 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. The heterodimeric RELA-NFKB1 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. The NF-kappa-B heterodimeric RELA-NFKB1 and RELA-RELB complexes, for instance, function as transcriptional activators. 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. The inhibitory effect of I-kappa-B on NF-kappa-B through retention in the cytoplasm is exerted primarily through the interaction with RELA. RELA shows a weak DNA-binding site which could contribute directly to DNA binding in the NF-kappa-B complex. Beside its activity as a direct transcriptional activator, it is also able to modulate promoters accessibility to transcription factors and thereby indirectly regulate gene expression. Associates with chromatin at the NF-kappa-B promoter region via association with DDX1. Essential for cytokine gene expression in T-cells (PubMed:15790681). The NF-kappa-B homodimeric RELA-RELA complex appears to be involved in invasion-mediated activation of IL-8 expression. [UniProt] |
| Highlight      | Related products:<br><a href="#">NFkB p65 antibodies</a> ; <a href="#">NFkB p65 Duos / Panels</a> ; <a href="#">Anti-Rabbit IgG secondary antibodies</a> ;<br>Related news:<br><a href="#">Exploring Antiviral Immune Response</a>   |
| Research Area  | Cancer antibody; Cell Biology and Cellular Response antibody; Cell Death antibody; Gene Regulation antibody; Immune System antibody; Metabolism antibody; Microbiology and Infectious Disease antibody; Neuroscience antibody; Signaling Transduction antibody; NFkB nuclear translocation Study antibody; Inflammation Study antibody   |
| Calculated Mw  | 60 kDa   |
| PTM            | Ubiquitinated, leading to its proteasomal degradation. Degradation is required for termination of NF-kappa-B response.<br>Monomethylated at Lys-310 by SETD6. Monomethylation at Lys-310 is recognized by the ANK repeats of EHMT1 and promotes the formation of repressed chromatin at target genes, leading to down-regulation of NF-kappa-B transcription factor activity. Phosphorylation at Ser-311 disrupts the interaction with EHMT1 without preventing monomethylation at Lys-310 and relieves the repression of target genes (By similarity).<br>Phosphorylation at Ser-311 disrupts the interaction with EHMT1 and promotes transcription factor  |

activity (By similarity). Phosphorylation on Ser-536 stimulates acetylation on Lys-310 and interaction with CBP; the phosphorylated and acetylated forms show enhanced transcriptional activity. Phosphorylation at Ser-276 by RPS6KA4 and RPS6KA5 promotes its transactivation and transcriptional activities.

Reversibly acetylated; the acetylation seems to be mediated by CBP, the deacetylation by HDAC3 and SIRT2. Acetylation at Lys-122 enhances DNA binding and impairs association with NFKBIA. Acetylation at Lys-310 is required for full transcriptional activity in the absence of effects on DNA binding and NFKBIA association. Acetylation at Lys-310 promotes interaction with BRD4. Acetylation can also lower DNA-binding and results in nuclear export. Interaction with BRMS1 promotes deacetylation of Lys-310. Lys-310 is deacetylated by SIRT2.

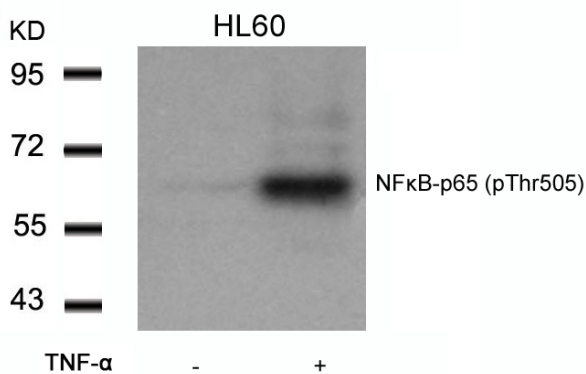
S-nitrosylation of Cys-38 inactivates the enzyme activity.

Sulfhydrylation at Cys-38 mediates the anti-apoptotic activity by promoting the interaction with RPS3 and activating the transcription factor activity.

Sumoylation by PIAS3 negatively regulates DNA-bound activated NF-kappa-B.

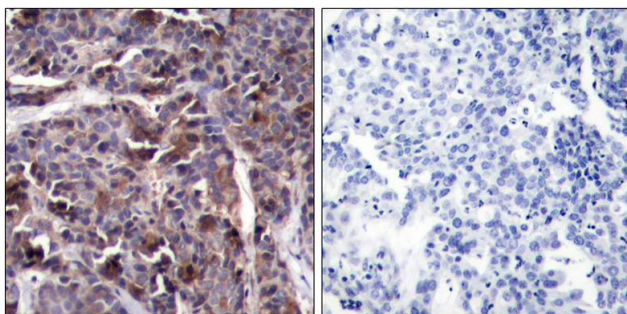
Proteolytically cleaved within a conserved N-terminus region required for base-specific contact with DNA in a CPEN1-mediated manner, and hence inhibits NF-kappa-B transcriptional activity (PubMed:18212740).

## Images



ARG51664 anti-NFκB p65 phospho (Thr505) antibody WB image

Western blot: Extracts from HL60 cells untreated or treated with TNF-α stained with ARG51664 anti-NFκB p65 phospho (Thr505) antibody.



ARG51664 anti-NFκB p65 phospho (Thr505) antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human breast carcinoma tissue stained with ARG51664 anti-NFκB p65 phospho (Thr505) antibody (left) or the same antibody preincubated with blocking peptide (right).