

ARG51745 anti-NFkB p65 phospho (Ser311) antibody

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

Summary

Product Description	Rabbit Polyclonal antibody recognizes NFkB p65 phospho (Ser311)
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
lsotype	lgG
Target Name	NFkB p65
Species	Human
Immunogen	Peptide sequence around phosphorylation site of serine $311(F-K-S(p)-I-M)$ derived from Human NF κ B-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; NFKB3; p65; Transcription factor p65

Application Instructions

Application table	Application	Dilution
	ICC/IF	1:100 - 1:200
	IHC-P	1:50 - 1:100
	WB	1:500 - 1:1000
Application Note	* The dilutions indicate recomme	ended 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 apitope-specific phosphopeptide.
Purification Antibodies were produced by immunizing rabbits with KLH-conjugated synthetic phosphopeptide.
addition, non-phospho specific antibodies were removed by chromatogramphy using non- phosphopeptide.
Buffer PBS (without Mg2+ and Ca2+, 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

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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	GenelD: 19697 Mouse
	GenelD: 5970 Human
	Swiss-port # Q04206 Human
	Swiss-port # Q04207 Mouse
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-REL 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 activator, 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 complex which translocates to the nucleus. The inhibitory effect of I-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 invasin-mediated activation of IL-8 expression. [UniProt]
Highlight	Related products: <u>NFkB p65 antibodies;</u> <u>NFkB p65 Duos / Panels;</u> <u>Anti-Rabbit IgG secondary antibodies;</u> Related news: <u>Exploring Antiviral Immune Response</u>
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. 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).

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.

Sulfhydration 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



ARG51745 anti-NFkB p65 phospho (Ser311) antibody WB image

Western blot: Extracts from HeLa cells untreated or treated with IFN- α stained with ARG51745 anti-NFkB p65 phospho (Ser311) antibody.



ARG51745 anti-NFkB p65 phospho (Ser311) antibody ICC/IF image

Immunofluorescence: methanol-fixed HeLa cells stained with ARG51745 anti-NFkB p65 phospho (Ser311) antibody, (red).

ARG51745 anti-NFkB p65 phospho (Ser311) antibody IHC-P image



Immunohistochemistry: Paraffin-embedded Human breast carcinoma tissue, stained with ARG51745 anti-NFkB p65 phospho (Ser311) antibody.