

Product datasheet for **SP2142**

NF-kB p65 (RELA) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, EMSA, IHC, IP, WB
Recommended Dilution:	ELISA. Immunoprecipitation. Western Blot: 1/2000 - 1/5000. Gel Super Shift Assays: 0.5-1µl per test; In a gel supershift assay it was found to be active against all p65 containing human and mouse NFkB complexes using 0.5µl to 1.0µl per assay.
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	NFkB p65 peptide corresponding to the C-terminus region of the human protein conjugated to KLH.
Specificity:	This antibody is reactive with NFkB p65 subunit (Rel A). A control peptide that competes specifically with the antiserum is available SP2142CP.
Formulation:	Containing 0.01% Sodium Azide State: Serum State: Liquid serum
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	RELA proto-oncogene, NF-kB subunit
Database Link:	Entrez Gene 5970 Human Q04206



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Background:

NF κ B (Nuclear Factor NF-kappa-B) is a pleiotropic transcription factor that plays a role in many biological processes, including inflammation, immunity, differentiation, cell growth, tumorigenesis, and apoptosis. It is found as a homo- or heterodimeric complex containing the Rel-like domain containing proteins NF κ B p65 (RELA/p65), RELB, NF κ B1/p105, NF κ B1/p50, REL and NF κ B2/p52. The heterodimeric NF κ B p65/p50 complex is the most abundant one. The dimers bind to kappa-B sites at their target genes, with the affinity of the interaction dependent on the subunit composition of the dimer. Furthermore, different dimers act as transcriptional activators or repressors, with the NF κ B p65/p50 and p65-c-Rel complexes acting as activators.

NF κ B activity is controlled by several different mechanisms, including post-translational modifications, subcellular localisation and interactions with other coactivators or corepressors. NF κ B complexes are held in the cytoplasm in an inactive state by interaction with members of the NF κ B inhibitor (I κ B) family. Typically, phosphorylation of I κ B by I κ B kinases (IKKs) in response to different activators leads to degradation of the inhibitor, allowing NF κ B to translocate into the nucleus. The inhibitory effect of I κ Bs is primarily exerted through their interaction with NF κ B p65.

NF κ B p65 is ubiquitinated leading to its proteosomal degradation, which is required for termination of the NF κ B response. Phosphorylation of NF κ B p65 on S536 stimulates acetylation of K310 by CBP, enhancing transcriptional activity. NF κ B p65 is also acetylated at K122, enhancing DNA binding and impairing the interaction with NF κ BIA. The protein is deacetylated by HDAC3.

Invasion of a host by a pathogen is frequently associated with the activation of NF- κ B, which coordinates various aspects of immune function required for resistance to infection.

Synonyms:

NF kappa B p65, NF κ B p65, Transcription factor p65, Rel A, NF κ B3