

SP2142CP**RELA / NF-kB p65 control peptide****Alternate names:**

NF kappa B p65, NFKB3, NFkB p65, Nuclear factor NF-kappa-B p65 subunit, Nuclear factor of kappa light polypeptide gene enhancer in B-cells 3, Rel A, Transcription factor p65

Quantity:

50 µg

Concentration:

1.0 mg/ml

Background:

NFkB (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 NFkB p65 (RELA/p65), RELB, NFkB1/p105, NFkB1/p50, REL and NFkB2/p52. The heterodimeric NFkB 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 NFkB p65/p50 and p65-c-Rel complexes acting as activators. NFkB activity is controlled by several different mechanisms, including post-translational modifications, subcellular localisation and interactions with other coactivators or corepressors. NFkB complexes are held in the cytoplasm in an inactive state by interaction with members of the NFkB inhibitor (IκB) family. Typically, phosphorylation of IκB by IκB kinases (IKKs) in response to different activators leads to degradation of the inhibitor, allowing NFkB to translocate into the nucleus. The inhibitory effect of IκBs is primarily exerted through their interaction with NFkB p65. NFkB p65 is ubiquitinated leading to its proteosomal degradation, which is required for termination of the NFkB response. Phosphorylation of NFkB p65 on S536 stimulates acetylation of K310 by CBP, enhancing transcriptional activity. NFkB p65 is also acetylated at K122, enhancing DNA binding and impairing the interaction with NFKBIA. The protein is deacetylated by HDAC3. Invasion of a host by a pathogen is frequently associated with the activation of NF-kB, which coordinates various aspects of immune function required for resistance to infection.

Uniprot ID:

[Q04206](#)

NCBI:

[NP_001138610.1](#)

GeneID:

[5970](#)

Format:

State: Liquid purified peptide

Purification: HPLC

Buffer System: Containing 0.01% Sodium Azide

Applications:

Functional Assays.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

SP2142CP is a Control Peptide for Human NFkB p65.

Species: Human.

Other species not tested.

Storage:

Store the peptide undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.

Avoid repeated freezing and thawing.

Shelf life: 6 month from despatch.