# Overview

**Product name**: Anti-NF-kB p65 (phospho S536) antibody

**Description**: Rabbit polyclonal to NF-kB p65 (phospho S536)

**Host species**: Rabbit

**Specificity**: NF-kappaB p65 (Phospho-Ser536) Antibody detects endogenous levels of NF-kappaB p65 only when phosphorylated at serine536

**Tested applications**: Suitable for: WB, IHC-P, ELISA

**Species reactivity**: Reacts with: Mouse, Rat, Human

**Immunogen**: Synthetic peptide corresponding to NF-kB p65 (C terminal) (phospho S536).

**Positive control**: IHC-P: Human breast carcinoma tissue. WB: K562 and COLO cell lysates.

## Properties

**Form**: Liquid


**Storage buffer**: pH: 7.40
- Preservative: 0.02% Sodium azide
- Constituents: PBS, 50% Glycerol, 0.87% Sodium chloride

- Without Mg2+ and Ca2+

**Purity**: Immunogen affinity purified

**Purification notes**: The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.

**Clonality**: Polyclonal

**Isotype**: IgG

## Applications

Our [Abpromise guarantee](#) covers the use of **ab28856** in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
NF-kappa-B is a pleiotropic transcription factor which is present in almost all cell types and is involved in 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 and the heterodimeric p65-p50 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. 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. NF-kappa-B heterodimeric p65-p50 and p65-c-Rel complexes are transcriptional activators. The NF-kappa-B p65-p65 complex appears to be involved in invasin-mediated activation of IL-8 expression. The inhibitory effect of I-kappa-B upon NF-kappa-B the cytoplasm is exerted primarily through the interaction with p65. p65 shows a weak DNA-binding site which could contribute directly to DNA binding in the NF-kappa-B complex. Associates with chromatin at the NF-kappa-B promoter region via association with DDX1.

Sequence similarities
Contains 1 RHD (Rel-like) domain.

Domain
the 9aaTAD motif is a transactivation domain present in a large number of yeast and animal transcription factors.

Post-translational modifications
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. 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. Reversibly acetylated; the acetylation seems to be mediated by CBP, the deacetylation by HDAC3. 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 can also lower DNA-binding and results in nuclear export. Interaction with BRMS1 promotes deacetylation of 'Lys-310'.

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<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/500 - 1/1000. Predicted molecular weight: 60 kDa.</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>1/50 - 1/100.</td>
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<tr>
<td>ELISA</td>
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<td>1/10000.</td>
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Target
Cellular localization

Nucleus. Cytoplasm. Nuclear, but also found in the cytoplasm in an inactive form complexed to an inhibitor (I-kappa-B). Colocalized with RELA in the nucleus upon TNF-alpha induction.

Images

**Western blot - Anti-NF-kB p65 (phospho S536) antibody (ab28856)**

All lanes: Anti-NF-kB p65 (phospho S536) antibody (ab28856)

Lane 1: K562 cell lysate
Lane 2: COLO cell lysate
Lane 3: COLO cell lysate with Phospho Ser536 peptide

Predicted band size: 60 kDa

**Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NF-kB p65 (phospho S536) antibody (ab28856)**

Paraffin embedded human breast carcinoma stained with ab28856. Left: ab28856, Right: same antibody preincubated with the corresponding synthesized phosphopeptide.

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