

Product datasheet

Anti-NF-kB p65 antibody ab47423

2 Images

Overview

<b>Product name</b>	Anti-NF-kB p65 antibody
<b>Description</b>	Rabbit polyclonal to NF-kB p65
<b>Host species</b>	Rabbit
<b>Specificity</b>	This antibody detects endogenous levels of total NF-kB p65 protein.
<b>Tested applications</b>	<b>Suitable for:</b> ELISA, IHC-P, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rat 
<b>Immunogen</b>	Synthetic peptide corresponding to Human NF-kB p65.
<b>Positive control</b>	IHC-P: Human breast carcinoma tissue. WB: MDA-MB-231 cell extracts.

Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.02% Sodium Azide Constituents: 50% Glycerol, PBS, 150mM Sodium chloride, pH 7.4
<b>Purity</b>	Immunogen affinity purified
<b>Purification notes</b>	This antibody was affinity purified from rabbit antiserum by affinity chromatography using epitope specific immunogen.
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab47423** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ELISA		1/10000.
IHC-P		Use at an assay dependent concentration.
WB		1/500 - 1/1000. Detects a band of approximately 67 kDa (predicted molecular weight: 60 kDa).

## Target

### Function

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 invasion-mediated activation of IL-8 expression. The inhibitory effect of I-kappa-B upon NF-kappa-B in 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.

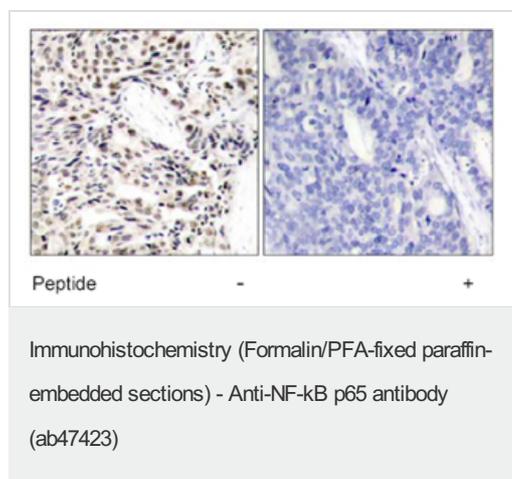
Phosphorylation at Ser-311 disrupts the interaction with EHMT1 and promotes transcription factor activity (By similarity). Phosphorylation on Ser-536 stimulates acetylation on Lys-310 and interaction with CBP; the phosphorylated and acetylated forms show enhanced transcriptional activity.

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'.

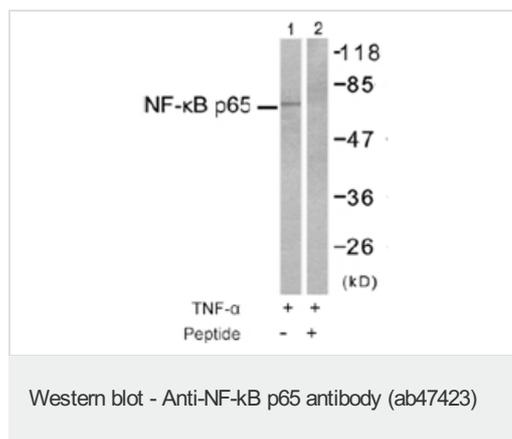
## Cellular localization

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



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue in the presence (right) and absence (left) of synthetic peptide, using ab47423 at 1/50 dilution and Alkaline Phosphatase AffiniPure Goat Anti-Rabbit IgG (H+L) secondary antibody.



**All lanes :** Anti-NF-kB p65 antibody (ab47423) at 1/500 dilution

**Lane 1 :** TNF alpha treated (20ng/ml, 10min) MDA-MB-231 cell extracts

**Lane 2 :** TNF alpha treated (20ng/ml, 10min) MDA-MB-231 cell extracts with synthetic peptide

**Predicted band size:** 60 kDa

**Observed band size:** 67 kDa

[why is the actual band size different from the predicted?](#)

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