

Product datasheet

Anti-NFkB p105 / p50 (phospho S907) antibody ab194927

[2 Images](#)

Overview

Product name	Anti-NFkB p105 / p50 (phospho S907) antibody
Description	Rabbit polyclonal to NFkB p105 / p50 (phospho S907)
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide within Human NFkB p105/ p50 (phospho S907). The exact sequence is proprietary. Database link: P19838
Positive control	TNF-alpha treated Hela cells, breast carcinoma tissue

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.3 Preservative: 0.02% Sodium azide Constituents: 49% PBS, 50% Glycerol
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab194927** 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
IHC-P		1/50 - 1/100.
WB		1/500 - 1/2000. Detects a band of approximately 120 kDa (predicted molecular weight: 105 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 RelB-p50 complexes are transcriptional activators. The NF-kappa-B p50-p50 homodimer is a transcriptional repressor, but can act as a transcriptional activator when associated with BCL3. NFKB1 appears to have dual functions such as cytoplasmic retention of attached NF-kappa-B proteins by p105 and generation of p50 by a cotranslational processing. The proteasome-mediated process ensures the production of both p50 and p105 and preserves their independent function, although processing of NFKB1/p105 also appears to occur post-translationally. p50 binds to the kappa-B consensus sequence 5'-GGRNNYYCC-3', located in the enhancer region of genes involved in immune response and acute phase reactions. In a complex with MAP3K8, NFKB1/p105 represses MAP3K8-induced MAPK signaling; active MAP3K8 is released by proteasome-dependent degradation of NFKB1/p105.

Sequence similarities

Contains 7 ANK repeats.
 Contains 1 death domain.
 Contains 1 RHD (Rel-like) domain.

Domain

The C-terminus of p105 might be involved in cytoplasmic retention, inhibition of DNA-binding, and transcription activation.
 Glycine-rich region (GRR) appears to be a critical element in the generation of p50.

Post-translational modifications

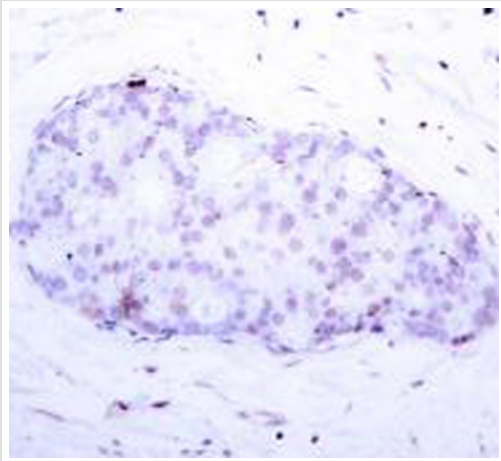
While translation occurs, the particular unfolded structure after the GRR repeat promotes the generation of p50 making it an acceptable substrate for the proteasome. This process is known as cotranslational processing. The processed form is active and the unprocessed form acts as an inhibitor (I kappa B-like), being able to form cytosolic complexes with NF-kappa B, trapping it in the cytoplasm. Complete folding of the region downstream of the GRR repeat precludes processing.
 Phosphorylation at 'Ser-903' and 'Ser-907' primes p105 for proteolytic processing in response to TNF-alpha stimulation. Phosphorylation at 'Ser-927' and 'Ser-932' are required for BTRC/BTRCP-mediated proteolysis.

Polyubiquitination seems to allow p105 processing.
S-nitrosylation of Cys-61 affects DNA binding.

Cellular localization

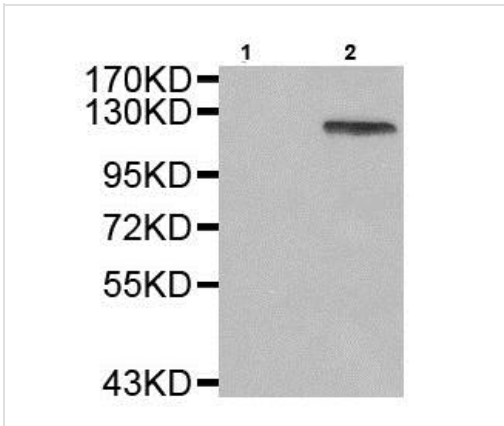
Nucleus. Cytoplasm. Nuclear, but also found in the cytoplasm in an inactive form complexed to an inhibitor.

Images



Immunohistochemical analysis of formalin fixed paraffin embedded human breast carcinoma labeling NFκB p105 / p50 (phospho S907) with ab194927 at 1/50 dilution

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NFκB p105 / p50 (phospho S907) antibody (ab194927)



All lanes : Anti-NFκB p105 / p50 (phospho S907) antibody (ab194927) at 1/500 dilution

Lane 1 : Untreated HeLa cell lysate

Lane 2 : TNF-α HeLa cell lysate

Predicted band size: 105 kDa

Additional bands at: 120 kDa. We are unsure as to the identity of these extra bands.

Western blot - Anti-NFκB p105 / p50 (phospho S907) antibody (ab194927)

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