

NFκB-p100 (Phospho Ser869) Rabbit pAb

CatalogNo: YP0182 **Orthogonal Validated** 

Comparable Abs 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB, IHC, IF, IP, ELISA

MW

- 97kD (Calculated)

Isotype

- IgG

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-1:2000

IHC 1:100-1:300

IP 2-5 ug/mg lysate

ELISA 1:10000

IF 1:50-200

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen The antiserum was produced against synthesized peptide derived from human NF-κB p100/p52 around the phosphorylation site of Ser869. AA range: 836-885

Specificity

Phospho-NFκB-p100 (S869) Polyclonal Antibody detects endogenous levels of NFκB-p100 protein only when phosphorylated at S869. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites): YGsQS

| Target Information

Gene name NFKB2 LYT10

Protein Name Nuclear factor NF-kappa-B p100 subunit

Organism	Gene ID	UniProt ID
Human	4791 ;	Q00653 ;
Mouse	18034 ;	Q9WTK5 ;

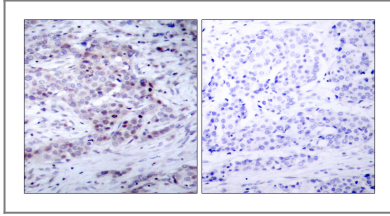
Cellular Localization Nucleus. Cytoplasm. Nuclear, but also found in the cytoplasm in an inactive form complexed to an inhibitor (I-kappa-B).

Tissue specificity Leukemia, Lymph, Thymus,

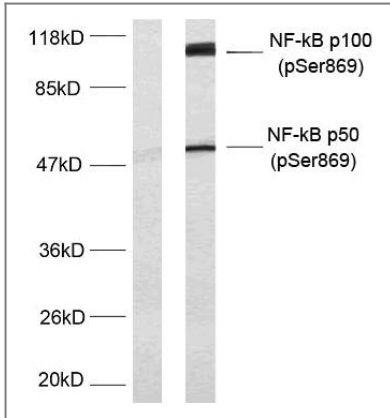
Function

Disease:A chromosomal aberration involving NFKB2 is found in a case of B-cell non Hodgkin lymphoma (B-NHL). Translocation t(10;14)(q24;q32) with IGHA1. The resulting oncogene is also called *Lyt-10C alpha variant*. Disease:A chromosomal aberration involving NFKB2 is found in a cutaneous T-cell leukemia (C-TCL) cell line. This rearrangement produces the *p80HT* gene which encodes for a truncated 80 kDa protein (*p80HT*). Disease:In B-cell leukemia (B-CLL) cell line, LB40 and EB308, can be found after heterogeneous chromosomal aberrations, such as internal deletions. Domain:The C-terminus of p100 might be involved in cytoplasmic retention, inhibition of DNA-binding by p52 homodimers, and/or transcription activation. Domain:The glycine-rich region (GRR) appears to be a critical element in the generation of p52. 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*. 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. In a non-canonical activation pathway, the MAP3K14-activated *CHUK/IKKA* homodimer phosphorylates *NFKB2/p100* associated with *RelB*, inducing its proteolytic processing to *NFKB2/p52* and the formation of NF-kappa-B *RelB-p52* complexes. The NF-kappa-B heterodimeric *RelB-p52* complex is a transcriptional activator. The NF-kappa-B *p52-p52* homodimer is a transcriptional repressor. *NFKB2* appears to have dual functions such as cytoplasmic retention of attached NF-kappa-B proteins by *p100* and generation of *p52* by a cotranslational processing. The proteasome-mediated process ensures the production of both *p52* and *p100* and preserves their independent function. *p52* 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. *p52* and *p100* are respectively the minor and major form; the processing of *p100* being relatively poor. Isoform *p49* is a subunit of the NF-kappa-B protein complex, which stimulates the HIV enhancer in synergy with *p65*. PTM:Constitutive processing is tightly suppressed by its C-terminal processing inhibitory domain, named PID, which contains the death domain. PTM:Subsequent to MAP3K14-dependent serine phosphorylation, *p100* polyubiquitination occurs then triggering its proteasome-dependent processing. PTM:While translation occurs, the particular unfolded structure after the GRR repeat promotes the generation of *p52* 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. Similarity:Contains 1 death domain. Similarity:Contains 1 RHD (Rel-like) domain. Similarity:Contains 7 ANK repeats. Subcellular location:Nuclear, but also found in the cytoplasm in an inactive form complexed to an inhibitor (I-kappa-B). Subunit:Component of the NF-kappa-B *RelB-p52* complex. Homodimer; component of the NF-kappa-B *p52-p52* complex. Component of the NF-kappa-B *p65-p52* complex. Component of the NF-kappa-B *p52-c-Rel* complex. *NFKB2/p52* interacts with *NFKBIE*. Component of a complex consisting of the NF-kappa-B *p50-p50* homodimer and *BCL3*.

Validation Data



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using NF-kappaB p100/p52 (Phospho-Ser869) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from MDA-MB-435 cells treated with TNF-alpha, using NF-kappaB p100/p52 (Phospho-Ser869) Antibody. The lane on the left is blocked with the phospho peptide.

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Please scan the QR code to access additional product information:
NFκB-p100 (Phospho Ser869) Rabbit pAb

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