

NF-κB p105/p50 Antibody

✓ 100 μl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

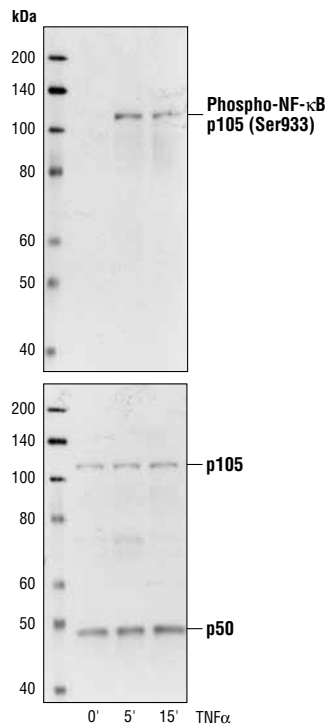
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, ChIP Endogenous	H, Mk	50 kDa Active form 120 kDa Precursor.	Rabbit**

Background: Transcription factors of the nuclear factor κB (NF-κB)/Rel family play a pivotal role in inflammatory and immune responses (1,2). There are five family members in mammals: RelA, c-Rel, RelB, NF-κB1 (p105/p50) and NF-κB2 (p100/p52). Both p105 and p100 are proteolytically processed by the proteasome to produce p50 and p52, respectively. Rel proteins bind p50 and p52 to form dimeric complexes that bind DNA and regulate transcription. In unstimulated cells, NF-κB is sequestered in the cytoplasm by IκB inhibitory proteins (3-5). NF-κB-activating agents can induce the phosphorylation of IκB proteins, targeting them for rapid degradation through an ubiquitin-proteasome pathway and releasing NF-κB to enter the nucleus where it regulates gene expression (6-8). NIK and IKKα (IKK1) regulate the phosphorylation and processing of NF-κB2 (p100) to produce p52, which is then translocated to the nucleus (9-11).

Following IKK-mediated phosphorylation of p105 NF-κB at multiple sites (Ser921, 923, 927, and 932) on its carboxy-terminus, SCF/β-TrCP mediated processing produces the 50 kDa active form p50 (12,13).

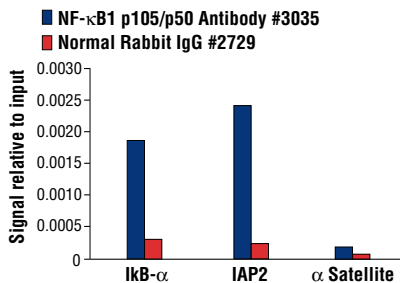
Specificity/Sensitivity: NF-κB p105/p50 Antibody detects endogenous levels of the precursor protein p105 and its cleavage product p50.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids at the amino-terminus of human NF-κB p105.



Western blot analysis of extracts from Vero cells, untreated or treated with TNF-α #2169 (20 ng/ml) for the times indicated, using Phospho-NF-κB p105 (Ser933) (18E6) Rabbit mAb #4806 (upper) and NF-κB p105/p50 Antibody #3035 (lower).

Chromatin immunoprecipitations were performed with cross-linked chromatin from 4 x 10⁶ HeLa cells treated with Human Tumor Necrosis Factor-α (hTNF-α) #8902 (30ng/ml) for 1 hour and either 20 μl of NF-κB1 p105/p50 Antibody #3035 or 2 μl of Normal Rabbit IgG #2729 using SimpleChIP™ Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by Real-Time PCR using SimpleChIP™ Human IκB-α Promoter Primers #5552, human IAP2 promoter primers, and SimpleChIP™ Human α Satellite Repeat Primers #4486. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.



Entrez-Gene ID #4790
Swiss-Prot Acc. #P19838

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

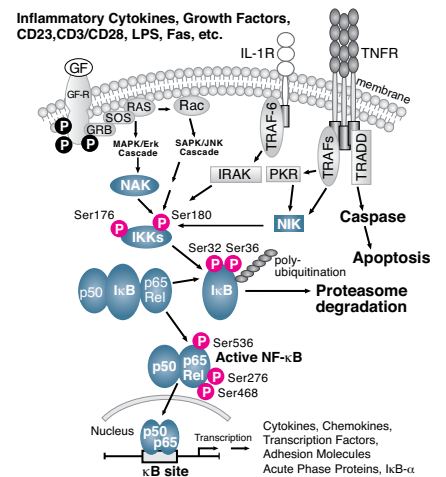
Recommended Antibody Dilutions:

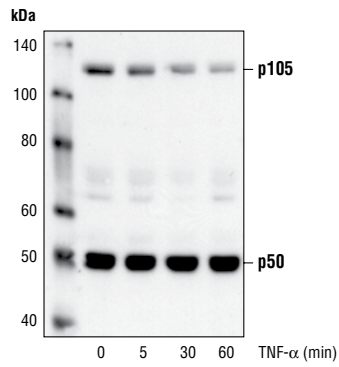
Western blotting	1:1000
Immunoprecipitation	1:50
Chromatin IP	1:25

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.





Western blot analysis of extracts from HeLa cells, untreated or treated with TNF- α (12ng/ml) for the indicated amounts of time, using NF- κ B p105/p50 Antibody.

Background References:

- (1) Baeuerle, P.A. and Henkel, T. (1994) *Annu Rev Immunol* 12, 141-79.
- (2) Baeuerle, P.A. and Baltimore, D. (1996) *Cell* 87, 13-20.
- (3) Haskill, S. et al. (1991) *Cell* 65, 1281-9.
- (4) Thompson, J.E. et al. (1995) *Cell* 80, 573-82.
- (5) Whiteside, S.T. et al. (1997) *EMBO J* 16, 1413-26.
- (6) Traenckner, E.B. et al. (1995) *EMBO J* 14, 2876-83.
- (7) Scherer, D.C. et al. (1995) *Proc Natl Acad Sci USA* 92, 11259-63.
- (8) Chen, Z.J. et al. (1996) *Cell* 84, 853-62.
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- (11) Xiao, G. et al. (2001) *Mol Cell* 7, 401-9.
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