

**For Research Use Only. Not For Use In Diagnostic Procedures.**

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, M, R, Mk, B, Dg, Pg	39 kDa	Rabbit**

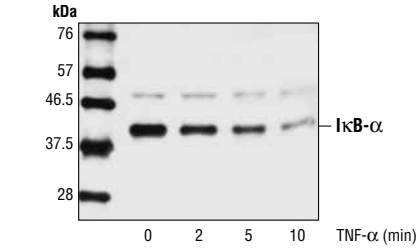
**Background:** The NF- $\kappa$ B/Rel transcription factors are present in the cytosol in an inactive state complexed with the inhibitory I $\kappa$ B proteins (1-3). Activation occurs via phosphorylation of I $\kappa$ B- $\alpha$  at Ser32 and Ser36 followed by proteasome-mediated degradation, resulting in the release and nuclear translocation of active NF- $\kappa$ B (3-7). I $\kappa$ B- $\alpha$  phosphorylation and resulting Rel-dependent transcription are activated by a highly diverse group of extracellular signals including inflammatory cytokines, growth factors and chemokines. Kinases that phosphorylate I $\kappa$ B at these activating sites have been identified (8). Because phosphorylation of I $\kappa$ B- $\alpha$  at Ser32 is essential for release of active NF- $\kappa$ B, phosphorylation at this site is an excellent marker of NF- $\kappa$ B activation (1-3).

**Specificity/Sensitivity:** I $\kappa$ B $\alpha$  Antibody detects endogenous levels of total I $\kappa$ B $\alpha$  protein. Under some experimental conditions it binds preferentially to I $\kappa$ B $\alpha$  that is not phosphorylated at Ser32/Ser36.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide surrounding Arg29 of human I $\kappa$ B $\alpha$ . Antibodies are purified by protein A and peptide affinity chromatography.

**Background References:**

- (1) Baeuerle, P.A. and Baltimore, D. (1988) *Science* 242, 540-546.
- (2) Beg, A.A. et al. (1993) *Genes Dev.* 7, 2064-2070.
- (3) Finco, T.S. et al. (1994) *Proc. Natl. Acad. Sci. USA* 91, 11884-11888.
- (4) Brown, K. et al. (1995) *Science* 267, 1485-1488.
- (5) Brockman, J.A. et al. (1995) *Mol. Cell. Biol.* 15, 2809-2818.
- (6) Traenckner, E.B. et al. (1995) *EMBO J.* 14, 2876-2883.
- (7) Chen, Z.J. et al. (1996) *Cell* 84, 853-862.
- (8) Karin, M. and Ben-Neriah, Y. (2000) *Annu. Rev. Immunol.* 18, 621-663.



Western blot analysis of extracts from HeLa cells treated with TNF- $\alpha$  for the indicated times, using I $\kappa$ B- $\alpha$  Antibody.

Entrez-Gene ID #4792  
Swiss-Prot Acc. #P25963

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA and 50% glycerol. Store at  $-20^{\circ}\text{C}$ . 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

**For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).**

**Please visit [www.cellsignal.com](http://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.**