

# I $\kappa$ B- $\alpha$ (112B2) Mouse mAb (Carboxy-terminal Antigen)

**Orders** ■ 877-616-CELL (2355)  
orders@cellsignal.com  
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info@cellsignal.com  
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Entrez-Gene ID #4792  
UniProt Acc. #P25963

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, R, (Hm, Mk)	39 kDa	Mouse IgG2a**

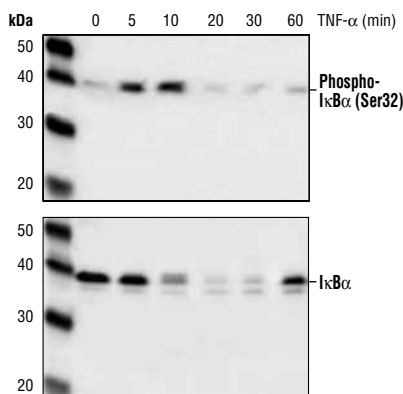
**Background:** The NF- $\kappa$ B/Rel transcription factors are present in the cytosol in an inactive state complexed with the inhibitory I $\kappa$ B proteins (1-3). Activation occurs via phosphorylation of I $\kappa$ B $\alpha$  at Ser32 and Ser36 followed by proteasome-mediated degradation that results 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).

**Specificity/Sensitivity:** I $\kappa$ B $\alpha$  (112B2) Mouse mAb (Carboxy-terminal Antigen) detects endogenous levels of total I $\kappa$ B $\alpha$  protein.

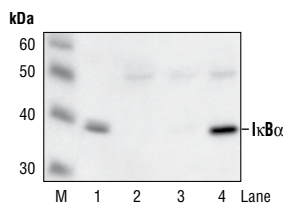
**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy-terminus of human I $\kappa$ B $\alpha$ .

**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- $\alpha$  (#2169, 10 ng/ml) for the indicated times, using Phospho-I $\kappa$ B $\alpha$  (Ser32) (14D4) Rabbit mAb #2859 (upper) or I $\kappa$ B $\alpha$  (112B2) Mouse mAb (Carboxy-terminal Antigen) (lower).



Western blot analysis of extracts from HT29 cells (lane 1), protein A alone immunoprecipitation (lane 2), immunoprecipitation with nonspecific mouse IgG2a (lane 3), or immunoprecipitation with I $\kappa$ B $\alpha$  (112B2) Mouse mAb (Carboxy-terminal Antigen) (lane 4). Western blot was performed using I $\kappa$ B $\alpha$  Antibody #9242.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-mouse 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.**

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**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.