

**#2681** Store at -20°C

# Phospho-IKK $\alpha$ (Ser180)/IKK $\beta$ (Ser181) Antibody

100  $\mu$ l  
 (10 western blots)



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rev. 05/27/10

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 Endogenous	H, M, (R, B)	85 kDa (IKK $\alpha$ ). 87 kDa (IKK $\beta$ ).	Rabbit**

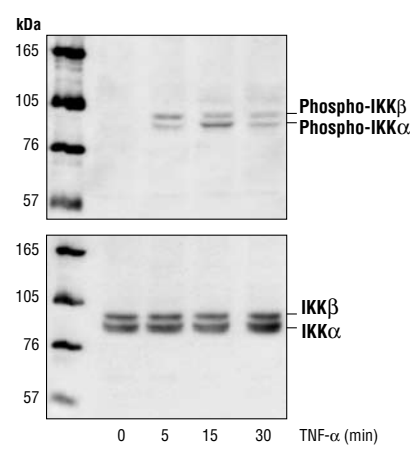
**Background:** The NF $\kappa$ B/Rel transcription factors are present in the cytosol in an inactive state, complexed with the inhibitory I $\kappa$ B proteins (1–3). Most agents that activate NF $\kappa$ B do so through a common pathway based on phosphorylation-induced, proteasome-mediated degradation of I $\kappa$ B (3–7). The key regulatory step in this pathway involves activation of a high molecular weight I $\kappa$ B kinase (IKK) complex, whose catalysis is generally carried out by three tightly associated IKK subunits. IKK $\alpha$  and IKK $\beta$  serve as the catalytic subunits of the kinase. IKK $\gamma$  serves as the regulatory subunit (8–9). Activation of IKK depends on phosphorylation; serines 177 and 181 in the activation loop of IKK $\beta$  (176 and 180 in IKK $\alpha$ ) are the specific sites whose phosphorylation causes conformational changes resulting in kinase activation (10–13).

**Specificity/Sensitivity:** Phospho-IKK $\alpha$  (Ser180)/IKK $\beta$  (Ser181) Antibody detects IKK $\alpha$  and IKK $\beta$  only when phosphorylated at serine 180 or serine 181, respectively.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser180 of human IKK $\alpha$ . Antibodies are purified by protein A and peptide affinity chromatography.

**Background References:**

- (1) Baeuerle, P.A. et al. (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) Zandi, E. et al. (1997) *Cell* 91, 243–252.
- (9) Karin, M. et al. (1999) *Oncogene* 18, 6867–6874.
- (10) DiDonato, J.A. et al. (1997) *Nature* 388, 548–554.
- (11) Mercurio, F. et al. (1997) *Science* 278, 860–866.
- (12) Johnson, L.N. et al. (1996) *Cell* 85, 149–158.
- (13) Delhase, M. et al. (1999) *Science* 284, 309–313.



Western blot analysis of extracts from HeLa cells treated with TNF- $\alpha$  for the indicated times, using Phospho-IKK $\alpha$  (Ser180)/IKK $\beta$  (Ser181) Antibody (upper) and control IKK $\alpha$ / $\beta$  antibodies (lower).

**Entrez-Gene ID** #1147, #3551  
**Swiss-Prot Acc.** #O15111, #O14920

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

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

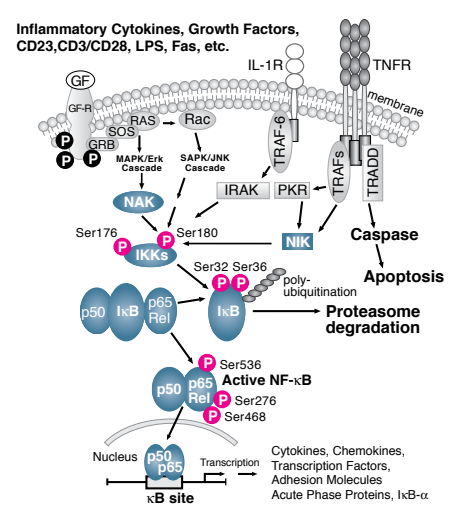
\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting 1:1000

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.**

**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.