

Store at -20C  
#9248**I $\kappa$ B $\beta$  Antibody**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	48	Rabbit	#Q15653	4793

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**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.

**Specificity/Sensitivity**

I $\kappa$ B $\beta$  Antibody detects endogenous levels of total I $\kappa$ B $\beta$  protein independent of phosphorylation.

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the middle of human and mouse I $\kappa$ B $\beta$ . Antibodies are purified by protein A and peptide affinity chromatography.

**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). The regulation of I $\kappa$ B $\beta$  and I $\kappa$ B $\epsilon$  is similar to that of I $\kappa$ B $\alpha$ . However, the phosphorylation and ubiquitin-mediated degradation of these proteins occurs with much slower kinetics (9). IKK phosphorylation of I $\kappa$ B $\beta$  occurs at Ser19 and Ser23, while I $\kappa$ B $\epsilon$  can be phosphorylated at Ser18 and Ser22 (10).

**Background References**

1. Baeuerle, P.A. and Baltimore, D. (1988) *Science* 242, 540-6.
2. Beg, A.A. and Baldwin, A.S. (1993) *Genes Dev* 7, 2064-70.
3. Finco, T.S. et al. (1994) *Proc Natl Acad Sci USA* 91, 11884-8.
4. Brown, K. et al. (1995) *Science* 267, 1485-8.
5. Brockman, J.A. et al. (1995) *Mol Cell Biol* 15, 2809-18.
6. Traenckner, E.B. et al. (1995) *EMBO J* 14, 2876-83.
7. Chen, Z.J. et al. (1996) *Cell* 84, 853-62.
8. Karin, M. and Ben-Neriah, Y. (2000) *Annu Rev Immunol* 18, 621-63.
9. Hoffmann, A. et al. (2002) *Science* 298, 1241-1245.
10. Shirane, M. et al. (1999) *J Biol Chem* 274, 28169-28174.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

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

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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