

Store at  
-20°C

# I $\kappa$ B $\beta$ (D1T3Z) Rabbit mAb

#15519



**Support:** +1-978-867-2388 (U.S.)  
www.cellsignal.com/support

**Orders:** 877-616-2355 (U.S.)  
orders@cellsignal.com

**Entrez-Gene ID** #18036  
**UniProt ID** #Q60778

New 06/19

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

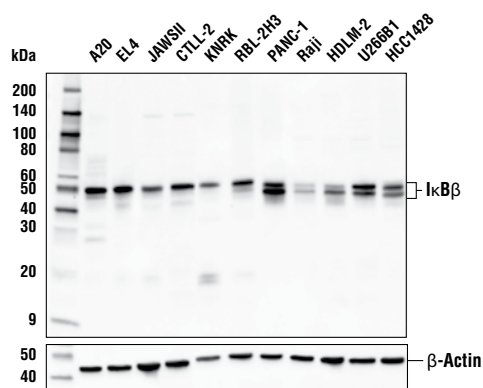
Applications W, IF-IC Endogenous	Species Cross-Reactivity* H, M, R	Molecular Wt. 45-48 kDa	Isotype Rabbit IgG**
--	--------------------------------------	----------------------------	-------------------------

**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).

**Specificity/Sensitivity:** I $\kappa$ B $\beta$  (D1T3Z) Rabbit mAb recognizes endogenous levels of total I $\kappa$ B $\beta$  protein. This antibody is recommended for immunofluorescence in mouse, but not human cells.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the amino terminus of mouse I $\kappa$ B $\beta$  protein.



Western blot analysis of extracts from various cell lines using I $\kappa$ B $\beta$  (D1T3Z) Rabbit mAb (upper) or  $\beta$ -Actin (D6A8) Rabbit mAb #8457 (lower).

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

#### Recommended Antibody Dilutions:

Western blotting	1:1000
Immunofluorescence (IF-IC)	1:1600-1:6400
Fixative:	4% Formaldehyde
Permeabilization:	0.3% Triton X-100

For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com).

#### 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, 1241-5.
- (10) Shirane, M. et al. (1999) *J Biol Chem* 274, 28169-74.

DyLight is a trademark of Thermo Fisher Scientific, Inc. and its subsidiaries. ProLong is a registered trademark of Life Technologies Corporation. Tween is a registered trademark of ICI Americas, Inc.

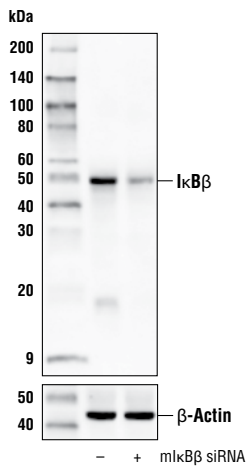
**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween<sup>®</sup>20 at 4°C with gentle shaking, overnight.**

Thank you for your recent purchase. If you would like to provide a review visit [cellsignal.com/comments](http://cellsignal.com/comments).

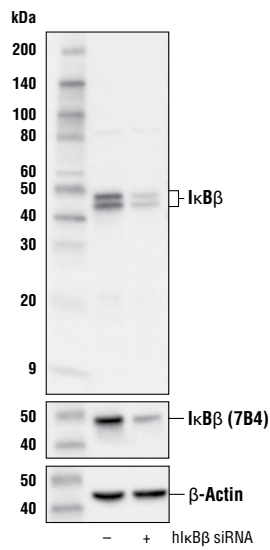
[www.cellsignal.com](http://www.cellsignal.com)

© 2019 Cell Signaling Technology, Inc.  
Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

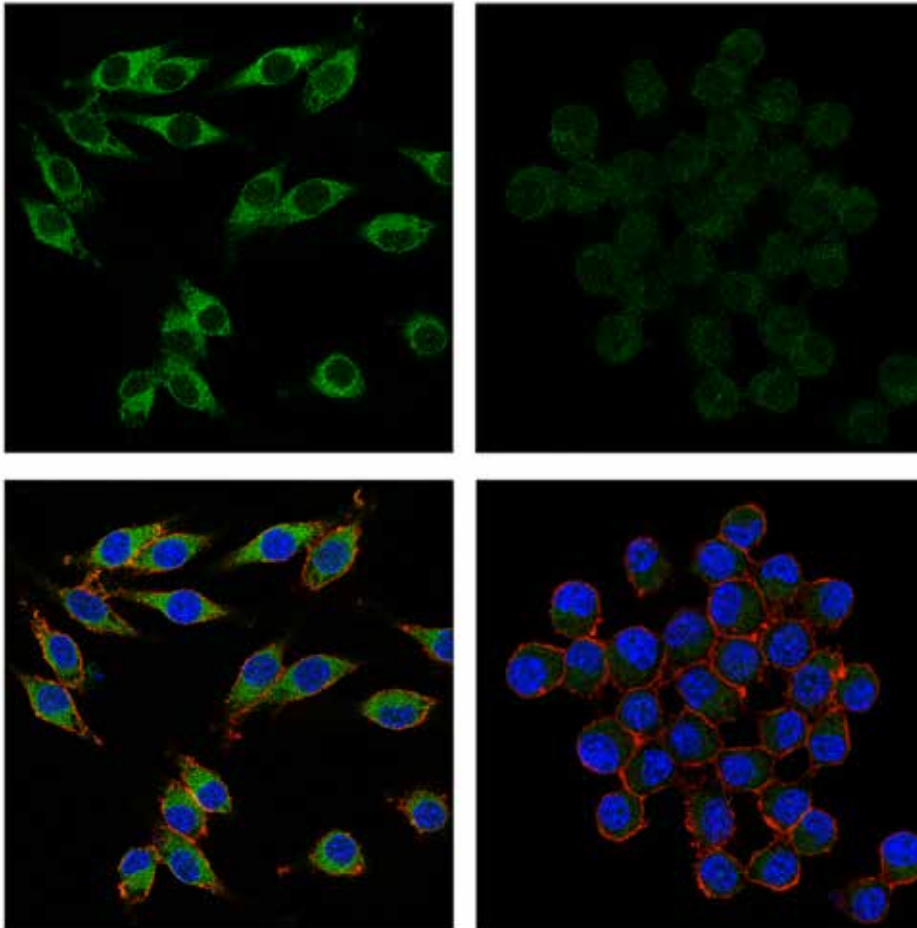
Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine 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.



Western blot analysis of extracts from L-929 cells, mock transfected (-) or transfected with mouse  $I\kappa B\beta$  siRNA (mIkB $\beta$  siRNA; +), using  $I\kappa B\beta$  (D1T3Z) Rabbit mAb (upper) or  $\beta$ -Actin (D6A8) Rabbit mAb #8457 (lower).



Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with human  $I\kappa B\beta$  siRNA (hIkB $\beta$  siRNA; +), using  $I\kappa B\beta$  (D1T3Z) Rabbit mAb (upper),  $I\kappa B\beta$  (7B4) Mouse mAb #8635 (middle), or  $\beta$ -Actin (D6A8) Rabbit mAb #8457 (lower).



Confocal immunofluorescent analysis of J774A.1 cells, either mock-transfected (left, high-expressing) or transfected with siRNA directed against mouse  $Nfkbib$  (right, low-expressing) using  $I\kappa B\beta$  (D1T3Z) Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Samples were mounted in ProLong® Gold Antifade Reagent with DAPI #8961 (blue).

Thank you for your recent purchase. If you would like to provide a review visit [cellsignal.com/comments](https://www.cellsignal.com/comments).

[www.cellsignal.com](https://www.cellsignal.com)