Revision 1

Store at -20C

#8635

IκBβ (7B4) Mouse mAb

Cell Signaling TECHNOLOGY®

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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	Endogenous	48	Mouse IgG1	#Q15653	4793

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

IκBβ (7B4) Mouse mAb recognizes endogenous levels of total IκBβ protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant protein specific to a carboxy terminal fragment of human IκBβ protein.

Background

The NF-κB/Rel transcription factors are present in the cytosol in an inactive state complexed with the inhibitory IκB proteins (1-3). Activation occurs via phosphorylation of IκBα at Ser32 and Ser36 followed by proteasome-mediated degradation that results in the release and nuclear translocation of active NF-κB (3-7). IκBα 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 IκB at these activating sites have been identified (8).
The regulation of IκBβ and IκBε is similar to that of IκBα. However, the phosphorylation and ubiquitin-mediated degradation of these proteins occurs with much slower kinetics (9). IKK phosphorylation of IκBβ occurs at Ser19 and Ser23, while IκBε 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, 1241-5.
10. Shirane, M. et al. (1999) *J Biol Chem* 274, 28169-74.

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

Trademarks and Patents

Limited Uses

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