

#8766 Store at -20C

Phospho-IKK ϵ (Ser172) (D1B7) Rabbit mAb



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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:
WB, IP	H	Endogenous	80	Rabbit IgG	#Q14164	9641

Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

Storage

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

Specificity / Sensitivity

Phospho-IKK ϵ (Ser172) (D1B7) Rabbit mAb recognizes endogenous levels of IKK ϵ protein only when phosphorylated at Ser172. This antibody may cross-react with phospho-TBK1/NAK.

Species predicted to react based on 100% sequence homology:

Mouse, Rat, Monkey, Dog

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser172 of human IKK ϵ protein.

Background

The NF- κ B/Rel transcription factors are present in the cytosol in an inactive state, complexed with the inhibitory I κ B proteins (1-3). Most agents that activate NF- κ B do so through a common pathway based on phosphorylation-induced, proteasome-mediated degradation of I κ B (3-7). The key regulatory step in this pathway involves activation of a high molecular weight I κ B kinase (IKK) complex whose catalysis is generally carried out by three tightly associated IKK subunits. IKK α and IKK β serve as the catalytic subunits of the kinase and IKK γ serves as the regulatory subunit (8,9). Activation of IKK depends upon phosphorylation at Ser177 and Ser181 in the activation loop of IKK β (Ser176 and Ser180 in IKK α), which causes conformational changes, resulting in kinase activation (10-13). Recently, two homologs of IKK α and IKK β have been described, called IKK ϵ (also known as IKK-i) and TBK1 (also known as T2K or NAK), and activation of either of these kinases results in NF- κ B activation. IKK ϵ contains the kinase domain in its amino terminus, which shares 30% identity to that of IKK α or IKK β . IKK ϵ is expressed mainly in immune cells, and may play a special role in the immune response (14-18). IKK ϵ and TBK1 kinase capabilities are activated by phosphorylation at Ser172 within their activation loops (19). IRF-3, a substrate for IKK ϵ and TBK1, plays a critical role in innate immune responses (20).

Background References

- Baeuerle, P.A. and Baltimore, D. (1988) *Science* 242, 540-6.
- Beg, A.A. and Baldwin, A.S. (1993) *Genes Dev* 7, 2064-70.
- Finco, T.S. et al. (1994) *Proc Natl Acad Sci USA* 91, 11884-8.
- Brown, K. et al. (1995) *Science* 267, 1485-8.
- Brockman, J.A. et al. (1995) *Mol Cell Biol* 15, 2809-18.
- Traenckner, E.B. et al. (1995) *EMBO J* 14, 2876-83.
- Chen, Z.J. et al. (1996) *Cell* 84, 853-62.
- Zandi, E. et al. (1997) *Cell* 91, 243-52.
- Karin, M. (1999) *Oncogene* 18, 6867-74.
- DiDonato, J.A. et al. (1997) *Nature* 388, 548-54.
- Mercurio, F. et al. (1997) *Science* 278, 860-6.
- Johnson, L.N. et al. (1996) *Cell* 85, 149-58.
- Delhase, M. et al. (1999) *Science* 284, 309-13.
- Shimada, T. et al. (1999) *Int Immunol* 11, 1357-62.
- Peters, R.T. et al. (2000) *Mol Cell* 5, 513-22.
- Tojima, Y. et al. (2000) *Nature* 404, 778-82.
- Bonnard, M. et al. (2000) *EMBO J* 19, 4976-85.
- Peters, R.T. and Maniatis, T. (2001) *Biochim Biophys Acta* 1471, M57-62.
- Kishore, N. et al. (2002) *J Biol Chem* 277, 13840-7.

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	WB: Western Blotting IP: Immunoprecipitation
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus 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 GP: Guinea Pig Rab: rabbit All: all species expected
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