

I κ B- ϵ (1-365): sc-4328 WB

BACKGROUND

On the basis of both functional and structural considerations, members of the I κ B family of proteins can be divided into four groups. The first of these groups, I κ B- α (a 35-37 kDa protein), includes the avian protein pp40 and the mammalian Mad 3, both of which inhibit binding of p50-p65 NF κ B complex or Rel protein to their cognate binding sites but do not inhibit the binding of p50 homodimer to κ B sites, suggesting that the I κ B- α family binds to the p65 subunit of p50-p65 heterocomplex through ankyrin repeats. The second member of the I κ B family is represented by a 45 kDa protein designated I κ B- β . The third group of I κ B proteins is represented by I κ B- γ , a 70 kDa protein identical in sequence with the C-terminal domain of the p110 precursor of NF κ B p50 and expressed predominantly in lymphoid cells. An additional I κ B family member has been identified as I κ B- ϵ , a 45 kDa protein which has several phosphorylated forms and is primarily found complexed with Rel A and/or c-Rel.

REFERENCES

1. Ghosh, S. and Baltimore, D. 1990. Activation *in vitro* to NF κ B by phosphorylation of its inhibitor I κ B. *Nature* 344: 678-682.
2. Kerr, L.D., Inoue, J.-I., Davis, N., Link, E., Baeuerle, P.A., Bose, H.A.J., and Verma, I.M. 1991. The Rel-associated pp40 protein prevents DNA binding of Rel and NF κ B: relationship with I κ B- β and regulation by phosphorylation. *Genes Dev.* 5: 1464-1476.
3. Davis, N., Ghosh, S., Simmons, D.L., Tempst, P., Liou, H.-C., Baltimore, D., and Bose, H.R. 1991. Rel-associated pp40: an inhibitor of the Rel family of transcription factors. *Science* 252: 1268-1271.
4. Haskill, S., Beg, A.A., Tompkins, S.M., Morris, J.S., Yurochko, A.D., Sampson-Johannes, A., Mondal, K., Ralph, P., and Baldwin, A.S. 1991. Characterization of an immediate-early gene induced in adherent monocytes that encodes I κ B-like activity. *Cell* 65: 1281-1289.
5. Inoue, J.-I., Kerr, L.D., Kakizuka, A., and Verma, I.M. 1992. I κ B- γ , a 70 kDa protein identical to the C-terminal half of p110 NF κ B; a new member of the I κ B family. *Cell* 68: 1109-1120.
6. Thompson, J.E., Phillips, R.J., Erdjument-Bromage, H., Tempst, P., and Ghosh, S. 1995. I κ B- β regulates the persistent response in biphasic activation of NF κ B. *Cell* 80: 573-582.
7. Whiteside, S.T., Epinat, J.C., Rice, N.R., and Israel, A. 1997. I κ B- ϵ , a novel member of the I κ B family, controls RelA and cRel NF- κ B activity. *EMBO J.* 16: 1413-1426.
8. Simeonidis, S., Liang, S., Chen, G., and Thanos, D. 1997. Cloning and functional characterization of mouse I κ B- ϵ . *Proc. Natl. Acad. Sci. USA* 94: 14372-14377.

SOURCE

I κ B- ϵ (1-365) is expressed in *E. coli* as a 90 kDa tagged fusion protein corresponding to amino acids 1-365 of I κ B- ϵ of mouse origin.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PRODUCT

I κ B- ϵ (1-365) is purified from bacterial lysates (>98%) by column chromatography; supplied as 10 μ g in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

I κ B- ϵ (1-365) is suitable as a Western blotting control for sc-7155, sc-7156 and sc-7275.

RESEARCH USE

For research use only, not for use in diagnostic procedures.