## SANTA CRUZ BIOTECHNOLOGY, INC.

# ΙκΒ-ε (D-7): sc-373958



### BACKGROUND

On the basis of both functional and structural considerations, members of the IkB family of proteins can be divided into four groups. The first of these groups, IkB- $\alpha$ , includes the avian protein pp40 and the mammalian MAD-3, both of which inhibit binding of p50-p65 NFkB complex or Rel protein to their cognate binding sites but do not inhibit the binding of p50 homodimer to kB sites, suggesting that the IkB- $\alpha$  family binds to the p65 subunit of p50-p65 heterocomplex through ankyrin repeats. The second member of the IkB family is represented by a protein designated IkB- $\beta$ . The third group of IkB proteins is represented by IkB- $\gamma$ , which is identical in sequence with the C-terminal domain of the p110 precursor of NFkB p50 and is expressed predominantly in lymphoid cells. An additional IkB family member, IkB- $\epsilon$ , has several phosphorylated forms and is primarily found complexed with ReI A and/or c-ReI.

### REFERENCES

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- 2. Kerr, L.D., et al. 1991. The Rel-associated pp40 protein prevents DNA binding of Rel and NF $\kappa$ B: relationship with I $\kappa$ B- $\beta$  and regulation by phosphorylation. Genes Dev. 5: 1464-1476.
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- 4. Haskill, S., et al. 1991. Characterization of an immediate-early gene induced in adherent monocytes that encodes  $I\kappa$ B-like activity. Cell 65: 1281-1289.
- Inoue, J., et al. 1992. IκB-γ, a 70 kd protein identical to the C-terminal half of p110 NFκB; a new member of the IκB family. Cell 68: 1109-1120.
- 6. Thompson, J.E., et al. 1995.  $I\kappa B$ - $\beta$  regulates the persistent response in biphasic activation of NF $\kappa$ B. Cell 80: 573-582.
- 7. Whiteside, S.T., et al. 1997.  $I\kappa B$ - $\epsilon$ , a novel member of the  $I\kappa B$  family, controls ReIA and cReI NF $\kappa B$  activity. EMBO J. 16: 1413-1426.
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- 9. Lopez-Bojorquez, L.N., et al. 2004. NF $\kappa$ B translocation and endothelial cell activation is potentiated by macrophage-released signals co-secreted with TNF- $\alpha$  and IL-1 $\beta$ . Inflamm. Res. 53: 567-575.

## **CHROMOSOMAL LOCATION**

Genetic locus: Nfkbie (mouse) mapping to 17 B3.

## SOURCE

 $I\kappa B{\text -}\epsilon$  (D-7) is a mouse monoclonal antibody raised against amino acids 1-365 of  $I\kappa B{\text -}\epsilon$  of mouse origin.

## PRODUCT

Each vial contains 200  $\mu g$  IgG\_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

#### **APPLICATIONS**

IxB- $\epsilon$  (D-7) is recommended for detection of IxB- $\epsilon$  of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for  $I\kappa$ B- $\epsilon$  siRNA (m): sc-35643,  $I\kappa$ B- $\epsilon$  shRNA Plasmid (m): sc-35643-SH and  $I\kappa$ B- $\epsilon$  shRNA (m) Lentiviral Particles: sc-35643-V.

Molecular Weight of IkB-E: 51 kDa.

Positive Controls:  $I_{\kappa}B_{-\epsilon}$  (m): 293T Lysate: sc-120929 or WEHI-231 whole cell lysate: sc-2213.

## **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

#### DATA





 ${\rm k}{\rm B}{\rm e}$  (D-7): sc-373958. Western blot analysis of  ${\rm k}{\rm B}{\rm \cdot}{\rm e}$  expression in non-transfected: sc-117752 (**A**) and mouse  ${\rm lk}{\rm B}{\rm e}$  transfected: sc-120929 (**B**) 293T whole cell lysates.

 $I\kappa B{-}\epsilon$  (D-7): sc-373958. Western blot analysis of  $I\kappa B{-}\epsilon$  expression in WEHI-231 whole cell lysate.

#### **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### **RESEARCH USE**

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

#### PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.