SANTA CRUZ BIOTECHNOLOGY, INC.

cleaved IκB-α (4H110): sc-71291



BACKGROUND

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

REFERENCES

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- Haskill, S., et al. 1991. Characterization of an immediate-early gene induced in adherent monocytes that encodes IκB-like activity. Cell 65: 1281-1289.
- 3. Kerr, L.D., et al. 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.
- Davis, N., et al. 1991. Rel-associated pp40: an inhibitor of the Rel family of transcription factors. Science 252: 1268-1271.
- 5. Inoue, J., et al. 1992. $I\kappa B$ - γ , a 70 kDa protein identical to the C-terminal half of p110 NF κB ; a new member of the $I\kappa B$ family. Cell 68: 1109-1120.
- 6. Thompson, J.E., et al. 1995. $I\kappa B$ - β regulates the persistent response in biphasic activation of NF κB . Cell 80: 573-582.
- 7. Whiteside, S.T., et al. 1997. $I\kappa$ B- ϵ , a novel member of the $I\kappa$ B family, controls ReIA and cReI NF κ B activity. EMBO J. 16: 1413-1426.
- Simeonidis, S., et al. 1997. Cloning and functional characterization of mouse IκB-ε. Proc. Natl. Acad. Sci. USA 94: 14372-14377.

CHROMOSOMAL LOCATION

Genetic locus: NFKBIA (human) mapping to 14q13.2.

SOURCE

cleaved IxB- α (4H110) is a mouse monoclonal antibody raised against a short amino acid sequence containing the neoepitope at raised against synthetic IxB- α of human origin.

PRODUCT

Each vial contains 100 $\mu g~lgG_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

cleaved $l\kappa B-\alpha$ (4H110) is recommended for detection of cleaved $l\kappa B-\alpha$ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for $I\kappa B-\alpha$ siRNA (h): sc-29360, $I\kappa B-\alpha$ shRNA Plasmid (h): sc-29360-SH and $I\kappa B-\alpha$ shRNA (h) Lentiviral Particles: sc-29360-V.

Molecular Weight of $I\kappa B-\alpha$: 35-41 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

SELECT PRODUCT CITATIONS

- Zhang, J., et al. 2010. MEKK3 overexpression contributes to the hyperresponsiveness of IL-12-overproducing cells and CD4⁺ T conventional cells in nonobese diabetic mice. J. Immunol. 185: 3554-3563.
- Yan, C., et al. 2018. Smad ubiquitination regulatory factor 1 (Smurf1) promotes thyroid cancer cell proliferation and migration via ubiquitindependent degradation of Kisspeptin-1. Cell. Physiol. Biochem. 49: 2047-2059.
- Liu, L.F., et al. 2023. Inhibiting 5-hydroxytryptamine receptor 3 alleviates pathological changes of a mouse model of Alzheimer's disease. Neural Regen. Res. 18: 2019-2028.

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.