

cleaved I κ B- α (5D1623): sc-52900

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 , 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 protein designated I κ B- β . The third group of I κ B proteins is represented by I κ B- γ , a 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 protein which has several phosphorylated forms and is primarily found complexed with Rel A and/or c-Rel.

REFERENCES

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2. 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.
3. Davis, N., et al. 1991. Rel-associated pp40: an inhibitor of the Rel family of transcription factors. *Science* 252: 1268-1271.
4. Haskill, S., et al. 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., et al. 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., et al. 1995. I κ B- β regulates the persistent response in biphasic activation of NF κ B. *Cell* 80: 573-582.
7. Whiteside, S.T., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

cleaved I κ B- α (5D1623) is a mouse monoclonal antibody raised against a short amino acid sequence containing the neoepitope at raised against synthetic I κ B- α of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ 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 I κ B- α (5D1623) is recommended for detection of cleaved I κ B- α of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

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

Molecular Weight of cleaved I κ B- α : 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

1. Chen, H., et al. 2014. Anti-inflammatory effects of chicanine on murine macrophage by down-regulating LPS-induced inflammatory cytokines in I κ B α /MAPK/ERK signaling pathways. *Eur. J. Pharmacol.* 724: 168-174.
2. Yin, X., et al. 2018. Diallyl disulfide inhibits the metastasis of type II esophageal-gastric junction adenocarcinoma cells via NF κ B and PI3K/AKT signaling pathways *in vitro*. *Oncol. Rep.* 39: 784-794.
3. Liu, T., et al. 2018. Z-Guggulsterone attenuates astrocytes-mediated neuroinflammation after ischemia by inhibiting toll-like receptor 4 pathway. *J. Neurochem.* 147: 803-815.
4. Li, Q., et al. 2019. MicroRNA-9 enhances chemotherapy sensitivity of glioma to TMZ by suppressing TOPO II via the NF κ B signaling pathway. *Oncol. Lett.* 17: 4819-4826.
5. Wei, D., et al. 2019. MicroRNA-199a-5p functions as a tumor suppressor in oral squamous cell carcinoma via targeting the IKK β /NF κ B signaling pathway. *Int. J. Mol. Med.* 43: 1585-1596.
6. Su, J., et al. 2020. MicroRNA-140-5p ameliorates the high glucose-induced apoptosis and inflammation through suppressing TLR4/NF- κ B signaling pathway in human renal tubular epithelial cells. *Biosci. Rep.* 40: BSR20192384.
7. Zhang, P., et al. 2021. The protective effects of S14G-humanin (HNG) against lipopolysaccharide (LPS)-induced inflammatory response in human dental pulp cells (hDPCs) mediated by the TLR4/MyD88/NF- κ B pathway. *Bioengineered* 12: 7552-7562.

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.