

IKK α (O.T.156): sc-71333

BACKGROUND

The transcription factor NF κ B is retained in the cytoplasm in an inactive form by the inhibitory protein I κ B. Activation of NF κ B requires that I κ B be phosphorylated on specific serine residues, which results in targeted degradation of I κ B. I κ B kinase α (IKK α), previously designated CHUK, interacts with I κ B- α and specifically phosphorylates I κ B- α on Ser 32 and 36, the sites that trigger its degradation. IKK α appears to be critical for NF κ B activation in response to proinflammatory cytokines. Phosphorylation of I κ B by IKK α is stimulated by the NF κ B inducing kinase (NIK), which itself is a central regulator for NF κ B activation in response to TNF and IL-1. The functional IKK complex contains three subunits, IKK α , IKK β and IKK γ (also designated NEMO), and each appear to make essential contributions to I κ B phosphorylation.

REFERENCES

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- Thanos, D., et al. 1995. NF κ B: a lesson in family values. *Cell* 80: 529-532.
- Connelly, M.A., et al. 1995. CHUK, a new member of the helix-loop-helix and leucine zipper families of interacting proteins, contains a serine-threonine kinase catalytic domain. *Cell. Mol. Biol. Res.* 41: 537-549.
- Malinin, N.L., et al. 1997. MAP3K-related kinase involved in NF κ B induction by TNF, CD95 and IL-1. *Nature* 385: 540-544.
- DiDonato, J.A., et al. 1997. A cytokine-responsive I κ B kinase that activates the transcription factor NF κ B. *Nature* 388: 548-554.
- Regnier, C.H., et al. 1997. Identification and characterization of an I κ B kinase. *Cell* 90: 373-383.
- Song, H.Y., et al. 1997. Tumor necrosis factor (TNF)-mediated kinase cascades: bifurcation of nuclear factor κ B and c-Jun N-terminal kinase (JNK/SAPK) pathways at TNF receptor-associated factor 2. *Proc. Natl. Acad. Sci. USA* 94: 9792-9296.

CHROMOSOMAL LOCATION

Genetic locus: CHUK (human) mapping to 10q24.31; Chuk (mouse) mapping to 19 C3.

SOURCE

IKK α (O.T.156) is a mouse monoclonal antibody raised against full length native IKK 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.

RESEARCH USE

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

APPLICATIONS

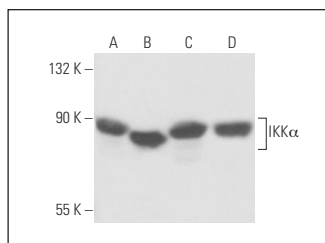
IKK α (O.T.156) is recommended for detection of IKK α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IKK α siRNA (h): sc-29365, IKK α siRNA (m): sc-29366, IKK α shRNA Plasmid (h): sc-29365-SH, IKK α shRNA Plasmid (m): sc-29366-SH, IKK α shRNA (h) Lentiviral Particles: sc-29365-V and IKK α shRNA (m) Lentiviral Particles: sc-29366-V.

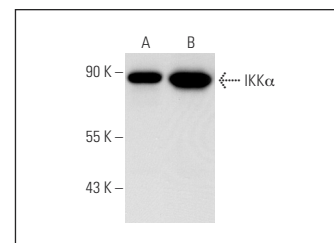
Molecular Weight of IKK α : 85 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, BJAB whole cell lysate: sc-2207 or WEHI-231 whole cell lysate: sc-2213.

DATA



IKK α (O.T.156): sc-71333. Western blot analysis of IKK α expression in BJAB (A), WEHI-231 (B), Jurkat (C) and SW-13 (D) whole cell lysates.



IKK α (O.T.156): sc-71333. Western blot analysis of IKK α expression in 293T (A) and HeLa (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Jin, X., et al. 2019. Phosphorylated RB promotes cancer immunity by inhibiting NF κ B activation and PD-L1 expression. *Mol. Cell* 73: 22-35.e6.
- Yuan, J., et al. 2021. MiRNA-223-3p affects mantle cell lymphoma development by regulating the CHUK/NF κ B2 signaling pathway. *Onco Targets Ther.* 14: 1553-1564.
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- Jang, H.Y., et al. 2022. CDDO, a PPAR- γ ligand, inhibits TPA-induced cell migration and invasion through a PPAR- γ -independent mechanism. *Oncol. Lett.* 24: 354.



See **IKK α (B-8): sc-7606** for IKK α antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.