

IKK γ (B-3): sc-8032



The Power to Question

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 the sites that trigger its degradation, Serines 32 and 36. 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.

CHROMOSOMAL LOCATION

Genetic locus: IKBKG (human) mapping to Xq28; Ikbkg (mouse) mapping to X A7.3.

SOURCE

IKK γ (B-3) is a mouse monoclonal antibody raised against amino acids 1-419 representing full length IKK of human origin.

PRODUCT

Each vial contains 200 μ g IgG κ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IKK γ (B-3) is available conjugated to agarose (sc-8032 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8032 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8032 PE), fluorescein (sc-8032 FITC), Alexa Fluor[®] 488 (sc-8032 AF488), Alexa Fluor[®] 546 (sc-8032 AF546), Alexa Fluor[®] 594 (sc-8032 AF594) or Alexa Fluor[®] 647 (sc-8032 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-8032 AF680) or Alexa Fluor[®] 790 (sc-8032 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

IKK γ (B-3) is recommended for detection of IKK γ 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)], 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 IKK γ siRNA (h): sc-29363, IKK γ siRNA (m): sc-29364, IKK γ shRNA Plasmid (h): sc-29363-SH, IKK γ shRNA Plasmid (m): sc-29364-SH, IKK γ shRNA (h) Lentiviral Particles: sc-29363-V and IKK γ shRNA (m) Lentiviral Particles: sc-29364-V.

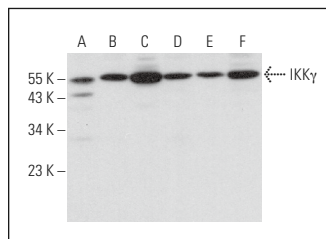
Molecular Weight of IKK γ : 48 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, C6 whole cell lysate: sc-364373 or C2C12 whole cell lysate: sc-364188.

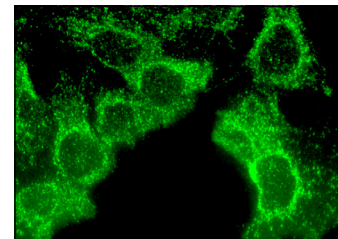
STORAGE

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

DATA



IKK γ (B-3): sc-8032. Western blot analysis of IKK γ expression in PC-3 (A), U-251-MG (B), c4 (C), C2C12 (D), A-10 (E) and C6 (F) whole cell lysates.



IKK γ (B-3): sc-8032. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Hehner, S.P., et al. 1999. The antiinflammatory sesquiterpene lactone parthenolide inhibits NF κ B by targeting the I κ B kinase complex. *J. Immunol.* 163: 5617-5623.
2. Chan, W., et al. 2013. A quantitative signaling screen identifies CARD11 mutations in the CARD and LATCH domains that induce Bcl10 ubiquitination and human lymphoma cell survival. *Mol. Cell. Biol.* 33: 429-443.
3. Sokolova, O., et al. 2014. MEKK3 and TAK1 synergize to activate IKK complex in *Helicobacter pylori* infection. *Biochim. Biophys. Acta* 1843: 715-724.
4. Pulvino, M., et al. 2015. Inhibition of COP9-signalosome (CSN) dened-dylating activity and tumor growth of diffuse large B-cell lymphomas by w. *Oncotarget* 6: 14796-14813.
5. Fusella, F., et al. 2017. The IKK/NF κ B signaling pathway requires Morgana to drive breast cancer metastasis. *Nat. Commun.* 8: 1636.
6. Van Quickenberghe, E., et al. 2018. A protein-protein interaction map of the TNF-induced NF κ B signal transduction pathway. *Sci. Data* 5: 180289.
7. Sciuto, M.R., et al. 2019. Two-step co-immunoprecipitation (TIP). *Curr. Protoc. Mol. Biol.* 125: e80.
8. Che, D.N., et al. 2020. Luteolin suppresses IL-31 production in IL-33-stimulated mast cells through MAPK and NF κ B signaling pathways. *Int. Immunopharmacol.* 83: 106403.
9. Yu, J.S., et al. 2021. Substrate-specific recognition of IKKs mediated by USP16 facilitates autoimmune inflammation. *Sci. Adv.* 7: eabc4009.
10. Min, S., et al. 2022. Heat shock protein 60 couples an oxidative stress-responsive p38/MK2 signaling and NF κ B survival machinery in cancer cells. *Redox Biol.* 51: 102293.

RESEARCH USE

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