SANTA CRUZ BIOTECHNOLOGY, INC.

IKKβ (C-20): sc-7329

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

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

CHROMOSOMAL LOCATION

Genetic locus: IKBKB (human) mapping to 8p11.21.

SOURCE

IKKβ (C-20) is available as either goat (sc-7329) or rabbit (sc-7329-R) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of IKKβ of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7329 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IKKβ (C-20) is recommended for detection of IKKβ of human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IKKβ (C-20) is also recommended for detection of IKKβ in additional species, including canine.

Suitable for use as control antibody for IKKβ siRNA (h): sc-35644, IKKβ shRNA Plasmid (h): sc-35644-SH and IKKβ shRNA (h) Lentiviral Particles: sc-35644-V.

Molecular Weight of IKKβ: 87 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

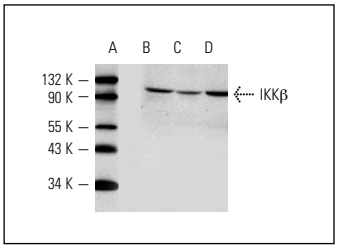
STORAGE

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

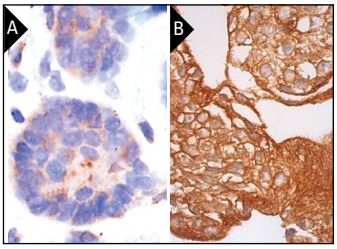
RESEARCH USE

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

DATA



IKKβ (C-20): sc-7329. Western blot analysis of IKKβ expression in Jurkat (**A**), BJAB (**B**), HL-60 (**C**) and HeLa (**D**) whole cell lysates.



IKKβ (C-20): sc-7329. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of trophoblastic cells (**B**).

SELECT PRODUCT CITATIONS

1. Ludwig, L., et al. 2001. NFκB is constitutively active in C cell carcinoma and required for Ret-induced transformation. Cancer Res. 61: 4526-4535.
2. Yeh, P.Y., et al. 2011. IκB kinases increase Myc protein stability and enhance progression of breast cancer cells. Mol. Cancer 10: 53.
3. Anitha, P., et al. 2011. Ellagic acid coordinately attenuates Wnt/β-catenin and NFκB signaling pathways to induce intrinsic apoptosis in an animal model of oral oncogenesis. Eur. J. Nutr. 52: 75-84.
4. Thiyagarajan, P., et al. 2011. Dietary chlorophyllin inhibits the canonical NFκB signaling pathway and induces intrinsic apoptosis in a hamster model of oral oncogenesis. Food Chem. Toxicol. 50: 867-876.
5. Kavitha, K., et al. 2012. Nimbolide, a neem limonoid abrogates canonical NFκB and Wnt signaling to induce caspase-dependent apoptosis in human hepatocarcinoma (Hep G2) cells. Eur. J. Pharmacol. 681: 6-14.
6. Priyadarsini, R.V., et al. 2012. Quercetin suppresses cytochrome P450 mediated ROS generation and NFκB activation to inhibit the development of 7,12-dimethylbenz[a]anthracene (DMBA) induced hamster buccal pouch carcinomas. Free Radic. Res. 46: 41-49.
7. Manikandan, P., et al. 2012. Investigation of the chemopreventive potential of neem leaf subfractions in the hamster buccal pouch model and phytochemical characterization. Eur. J. Med. Chem. 56: 271-281.
8. Van Duyne, R., et al. 2012. Localization and sub-cellular shuttling of HTLV-1 tax with the miRNA machinery. PLoS ONE 7: e40662.