SANTA CRUZ BIOTECHNOLOGY, INC.

RBP-Jκ (E-7): sc-271128

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Recombination signal binding protein Jκ (RBP-Jκ), also designated KBF2 or CBF1, is the mammalian homolog of the *Drosophila* suppressor of hairless [Su(H)], a protein involved in the development of the peripheral nervous system. RBP-Jκ is ubiquitously expressed in mammalian tissues and is involved in the regulation of gene expression. RBP-Jκ has been shown to directly interact with the intercellular domain of the cell surface receptor Notch 1. Proteolytically cleaved Notch 1 translocates to the nucleus, where it binds DNA-bound RBP-Jκ and activates transcription of target genes. These genes include NFκB p52 and the Epstein-Barr virus (EBV) protein EBNA-2, both of which contain RBP-Jκ-binding sequences within their promoter regions.

REFERENCES

1. Amakawa, R., et al. 1993. Human Jκ recombination signal binding protein gene (IGKJRB): comparison with its mouse homologue. Genomics 17: 306-315.
2. Waltzer, L., et al. 1994. The human Jκ recombination signal sequence binding protein (RBP-Jκ) targets the Epstein-Barr virus EBNA2 protein to its DNA responsive elements. EMBO J. 13: 5633-5638.

CHROMOSOMAL LOCATION

Genetic locus: RBPJ (human) mapping to 4p15.2; Rbpj (mouse) mapping to 5 C1.

SOURCE

RBP-Jκ (E-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 249-278 within an internal region of RBP-Jκ of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RBP-Jκ (E-7) is available conjugated to agarose (sc-271128 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271128 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271128 PE), fluorescein (sc-271128 FITC), Alexa Fluor® 488 (sc-271128 AF488), Alexa Fluor® 546 (sc-271128 AF546), Alexa Fluor® 594 (sc-271128 AF594) or Alexa Fluor® 647 (sc-271128 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271128 AF680) or Alexa Fluor® 790 (sc-271128 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271128 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

RBP-Jκ (E-7) is recommended for detection of RBP-Jκ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

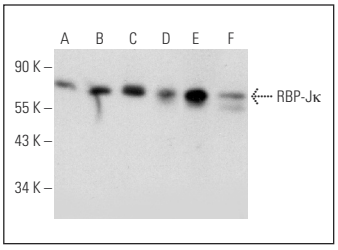
RBP-Jκ (E-7) is also recommended for detection of RBP-Jκ in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for RBP-Jκ siRNA (h): sc-38214, RBP-Jκ siRNA (m): sc-38215, RBP-Jκ siRNA (r): sc-270318, RBP-Jκ shRNA Plasmid (h): sc-38214-SH, RBP-Jκ shRNA Plasmid (m): sc-38215-SH, RBP-Jκ shRNA Plasmid (r): sc-270318-SH, RBP-Jκ shRNA (h) Lentiviral Particles: sc-38214-V, RBP-Jκ shRNA (m) Lentiviral Particles: sc-38215-V and RBP-Jκ shRNA (r) Lentiviral Particles: sc-270318-V.

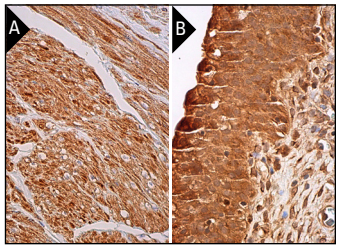
Molecular Weight of RBP-Jκ: 56 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, C6 whole cell lysate: sc-364373 or KNRK whole cell lysate: sc-2214.

DATA



RBP-Jκ (E-7): sc-271128. Western blot analysis of RBP-Jκ expression in Raji (**A**), Jurkat (**B**), NIH/3T3 (**C**), LADMAC (**D**), KNRK (**E**) and C6 (**F**) whole cell lysates.



RBP-Jκ (E-7): sc-271128. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic and nuclear staining of urothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Shimizu, T., et al. 2011. Notch signaling pathway enhances bone morphogenetic protein 2 (BMP2) responsiveness of Msx2 gene to induce osteogenic differentiation and mineralization of vascular smooth muscle cells. J. Biol. Chem. 286: 19138-19148.
2. Shi, Y., et al. 2022. Interaction between BEND5 and RBPJ suppresses breast cancer growth and metastasis via inhibiting Notch signaling. Int. J. Biol. Sci. 18: 4233-4244.
3. Prabhu, S., et al. 2023. Knockdown of sirtuin6 positively regulates acetylation of DNMT1 to inhibit the NOTCH signaling pathway in non-small cell lung cancer cell lines. Cell. Signal. 105: 110629.

RESEARCH USE

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