SANTA CRUZ BIOTECHNOLOGY, INC.

CIR (H-1): sc-514120

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Recombination signal binding protein Jκ (RBP-J 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 intracellular domain of the cell surface receptor Notch1. Proteolytically cleaved Notch1 translocates to the nucleus, where it binds to DNA-bound RBP-Jκ and activates transcription of target genes. CIR (for CBF-1 interacting corepressor) serves as a linker between RBP-Jκ and the histone deacetylase complex by binding to SAP30 and to histone deacetylase. CIR binding to RBP-Jκ results in transcriptional repression of Notch 1 target genes.

REFERENCES

1. Amakawa, R., et al. 1993. Human Jk recombination signal binding protein gene (IGKJRB): comparison with its mouse homologue. Genomics 17: 306-315.
2. Oka, C., et al. 1995. Disruption of the mouse RBP-Jκ gene results in early embryonic death. Development 121: 3291-3301.
3. Waltzer, L., et al. 1995. RBP-Jκ repression activity is mediated by a co-repressor and antagonized by the Epstein-Barr virus transcription factor EBNA2. Nucleic Acids Res. 23: 4939-4945.
4. Tamura, K., et al. 1995. Physical interaction between a novel domain of the receptor Notch and the transcription factor RBP-Jκ/Su(H). Curr. Biol. 5: 1416-1423.
5. Hsieh, J.J., et al. 1996. Truncated mammalian Notch1 activates CBF1/RBP-Jκ-repressed genes by a mechanism resembling that of Epstein-Barr virus EBNA2. Mol. Cell. Biol. 16: 952-959.

CHROMOSOMAL LOCATION

Genetic locus: CIR1 (human) mapping to 2q31.1; Cir1 (mouse) mapping to 2 C3.

SOURCE

CIR (H-1) is a mouse monoclonal antibody raised against amino acids 1-160 mapping at the N-terminus of CIR of human 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.

CIR (H-1) is available conjugated to agarose (sc-514120 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514120 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514120 PE), fluorescein (sc-514120 FITC), Alexa Fluor® 488 (sc-514120 AF488), Alexa Fluor® 546 (sc-514120 AF546), Alexa Fluor® 594 (sc-514120 AF594) or Alexa Fluor® 647 (sc-514120 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514120 AF680) or Alexa Fluor® 790 (sc-514120 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CIR (H-1) is recommended for detection of CIR 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

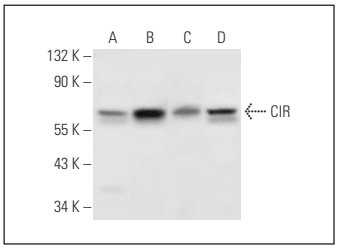
Suitable for use as control antibody for CIR siRNA (h): sc-38213, CIR siRNA (m): sc-142346, CIR shRNA Plasmid (h): sc-38213-SH, CIR shRNA Plasmid (m): sc-142346-SH, CIR shRNA (h) Lentiviral Particles: sc-38213-V and CIR shRNA (m) Lentiviral Particles: sc-142346-V.

Positive Controls: K-562 whole cell lysate: sc-2203, Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CIR (H-1): sc-514120. Western blot analysis of CIR expression in HeLa nuclear extract (**A**) and K-562 (**B**), Hep G2 (**C**) and Jurkat (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Sharma, A.L., et al. 2020. CBF-1 promotes the establishment and maintenance of HIV latency by recruiting polycomb repressive complexes, PRC1 and PRC2, at HIV LTR. Viruses 12: E1040.

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.