SANTA CRUZ BIOTECHNOLOGY, INC.

JAB1 siRNA (h): sc-35717

BACKGROUND

Genes belonging to the Jun and Fos oncogene families encode nuclear proteins that are found to be associated with a number of transcriptional complexes. The c-Jun protein is a major component of the transcription factor AP-1, originally shown to mediate phorbol ester tumor promoter (TPA)-induced expression of responsive genes through the TPA-response element (TRE). The Jun proteins form homo- and heterodimers which bind the TRE, but the Fos proteins are active only as heterodimers with any of the Jun proteins. Fos/Jun heterodimers have a much higher affinity for the TRE than Jun homodimers. Ha-Ras augments c-Jun activity and stimulates phosphorylation of its activation domain. The coactivator of Jun, designated JAB1 (for Jun-activation domain-binding protein), interacts with c-Jun and Jun D, but not with Jun B or v-Jun. This interaction enhances the transactivating ability of Jun proteins by stabilizing their binding to the TRE.

REFERENCES

1. Sambucetti, L.C., et al. 1986. The Fos protein complex is associated with DNA in isolated nuclei and binds to DNA cellulose. Science 234: 1417-1419.
2. Bohmann, D., et al. 1987. Human proto-oncogene c-Jun encodes a DNA binding protein with structural and functional properties of transcription factor AP-1. Science 238: 1386-1392.
3. Renz, M., et al. 1987. Chromatin association and DNA-binding properties of the c-Fos proto-oncogene product. Nucleic Acids Res.15: 277-292.

CHROMOSOMAL LOCATION

Genetic locus: COPS5 (human) mapping to 8q13.1.

PRODUCT

JAB1 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see JAB1 shRNA Plasmid (h): sc-35717-SH and JAB1 shRNA (h) Lentiviral Particles: sc-35717-V as alternate gene silencing products.

For independent verification of JAB1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-35717A, sc-35717B and sc-35717C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

JAB1 siRNA (h) is recommended for the inhibition of JAB1 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

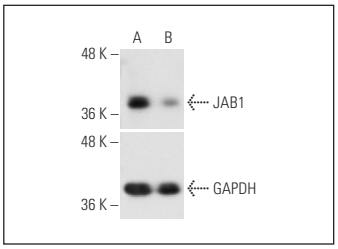
GENE EXPRESSION MONITORING

JAB1 (B-7): sc-13157 is recommended as a control antibody for monitoring of JAB1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor JAB1 gene expression knockdown using RT-PCR Primer: JAB1 (h)-PR: sc-35717-PR (20 µl, 415 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

DATA



JAB1 siRNA (h): sc-35717. Western blot analysis of JAB1 expression in non-transfected control (**A**) and JAB1 siRNA transfected (**B**) HeLa cells. Blot probed with JAB1 (B-7): sc-13157. GAPDH (FL-335): sc-25778 used as specificity and loading control.

SELECT PRODUCT CITATIONS

1. Luo, W. and Wang, Y. 2006. JAB1, a novel protease-activated receptor-2 (PAR-2)-interacting protein, is involved in PAR-2-induced activation of activator protein-1. J. Biol. Chem. 281: 7927-7936.
2. Kim, J.H., et al. 2009. JAB1/CSN5 induces the cytoplasmic localization and degradation of RUNX3. J. Cell. Biochem. 107: 557-565.
3. Pan, Y., et al. 2017. Azelaic acid exerts antileukemic activity in acute myeloid leukemia. Front. Pharmacol. 8: 359.

RESEARCH USE

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