SANTA CRUZ BIOTECHNOLOGY, INC.

ICSBP siRNA (m): sc-35631

BACKGROUND

ICSBP (interferon (IFN) consensus sequence-binding protein, interferon regulatory factor 8; IRF-8) is a transcription factor that is important for IFN-γ-mediated signaling during dendritic cell and macrophage differentiation. ICSBP physically interacts with TRAF6 (between amino acid residues 356 and 305), and this interaction of ICSBP with TRAF6 modulates TLR signaling and may contribute to the cross-talk between IFN-γ and TLR signal pathways. ICSBP antagonizes Bcr/Abl by downregulation of Bcl-2. ICSBP is known to interact with chromatin, and bind PU.1 in macrophages. ICSBP belongs to the IFN regulatory factor (IRF) family that also includes IRF-1, IRF-2, and ISGF-3. These proteins are composed of a conserved DNA-binding domain in the N-terminal region and a divergent C-terminal region that serves as the regulatory domain. The IRF family proteins bind to the IFN-stimulated response element (ISRE) and regulate expression of IFN-α and IFN-β.

REFERENCES

1. Burchert, A., et al. 2004. Interferon consensus sequence binding protein (ICSBP; IRF-8) antagonizes Bcr/Abl and downregulates Bcl-2. Blood 103: 3480-3489.
2. Schmidt, M., et al. 2004. The interferon regulatory factor ICSBP/IRF-8 in combination with PU.1 upregulates expression of tumor suppressor $p15^{Ink4b}$ in murine myeloid cells. Blood 103: 4142-4149.
3. Laricchia-Robbio, L., et al. 2005. Partner-regulated interaction of IFN regulatory factor 8 with chromatin visualized in live macrophages. Proc. Natl. Acad. Sci. USA 102: 14368-14373.
4. Xiong, H., et al. 2005. Ubiquitin-dependent degradation of interferon regulatory factor-8 mediated by Cbl downregulates Interleukin-12 expression. J. Biol. Chem. 280: 23531-23539.
5. Tamura, T., et al. 2005. IFN regulatory factor-4 and -8 govern dendritic cell subset development and their functional diversity. J. Immunol. 174: 2573-2581.
6. Nakano, N., et al. 2005. Analysis of PU.1/ICSBP (IRF-8) complex formation with various PU.1 mutants: molecular cloning of rat ICSBP (IRF-8) cDNA. Immunogenetics 56: 871-877.

CHROMOSOMAL LOCATION

Genetic locus: Irf8 (mouse) mapping to 8 E1.

PRODUCT

ICSBP siRNA (m) 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 ICSBP shRNA Plasmid (m): sc-35631-SH and ICSBP shRNA (m) Lentiviral Particles: sc-35631-V as alternate gene silencing products.

For independent verification of ICSBP (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-35631A, sc-35631B and sc-35631C.

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

ICSBP siRNA (m) is recommended for the inhibition of ICSBP expression in mouse 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

ICSBP (E-9): sc-365042 is recommended as a control antibody for monitoring of ICSBP 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).

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) 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ICSBP gene expression knockdown using RT-PCR Primer: ICSBP (m)-PR: sc-35631-PR (20 µl, 551 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Cai, Z., et al. 2009. Transcriptional regulation of TLR11 gene expression in epithelial cells. J. Biol. Chem. 284: 33088-33096.

RESEARCH USE

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