SANTA CRUZ BIOTECHNOLOGY, INC.

IRF-2BP1 siRNA (h): sc-97273

BACKGROUND

IRF-2 (interferon regulatory factor-2) has been identified as a novel DNA-binding factor that functions as a regulator of both type I interferon (interferon-α and β) and interferon-inducible genes. IRF-2 may act in a mutually antagonistic manner in regulating cell growth. IRF-2BP1 (interferon regulatory factor 2 binding protein 1) is a 584 amino acid nuclear protein belonging to the IRF-2BP family. IRF-2BP1 acts as a corepressor of IRF-2 that can inhibit both enhancer-activation and basal transcription in a manner that is not dependent upon histone deacetylation. IRF-2BP1 enhances the polyubiquitination of JDP2 (Jun-dimerization protein 2), a member of the c-Jun family of transcription factors. IRF-2BP1 contains a C-terminal RING-type zinc finger domain, which is necessary for interaction with BAP1 (BRCA1 associated protein 1). IRF-2BP1 is encoded by a gene located on human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes.

REFERENCES

1. Harada, H., et al. 1989. Structurally similar but functionally distinct factors, IRF-1 and IRF-2, bind to the same regulatory elements of IFN and IFN-inducible genes. Cell 58: 729-739.
2. Tanaka, N., et al. 1993. Recognition DNA sequence of interferon regulatory factor 1 (IRF-1) and IRF-2, regulators of cell growth and the interferon system. Mol. Cell. Biol. 13: 4531-4538.
3. Yamamoto, H., et al. 1994. The oncogenic transcription factor IRF-2 possesses a transcriptional repression and latent activation domain. Oncogene 9: 1423-1428.
4. Childs, K.S. and Goodbourn, S. 2003. Identification of novel corepressor molecules for interferon regulatory factor-2. Nucleic Acids Res. 31: 3016-3026.
5. Chae, M., et al. 2008. IRF-2 regulates NFκB activity by modulating the subcellular localization of NFκB. Biochem. Biophys. Res. Commun. 370: 519-524.

CHROMOSOMAL LOCATION

Genetic locus: IRF2BP1 (human) mapping to 19q13.32.

PRODUCT

IRF-2BP1 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 IRF-2BP1 shRNA Plasmid (h): sc-97273-SH and IRF-2BP1 shRNA (h) Lentiviral Particles: sc-97273-V as alternate gene silencing products.

For independent verification of IRF-2BP1 (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-97273A, sc-97273B and sc-97273C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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

IRF-2BP1 siRNA (h) is recommended for the inhibition of IRF-2BP1 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

IRF-2BP1 (A-10): sc-373899 is recommended as a control antibody for monitoring of IRF-2BP1 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 IRF-2BP1 gene expression knockdown using RT-PCR Primer: IRF-2BP1 (h)-PR: sc-97273-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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