SANTA CRUZ BIOTECHNOLOGY, INC.

IFRD2 siRNA (h): sc-78013

BACKGROUND

IFRD2 (interferon-related developmental regulator 2), also known as SKMC15, is a 442 amino acid soluble nuclear protein. IFRD2 is ubiquitously expressed and contains a β-catenin-like repeat, which may indicate an involvement in APC signaling. With 75% homology to IFRD1, IFRD2 may also regulate expression of surface adhesion molecules involved in differentiation and fusion of myogenic satellite cells. Although the gene encoding IFRD2 undergoes overlapping homozygous deletions in many lung cancer cell lines, IFRD2 exhibits no loss-of-function mutations in cancer cells, suggesting a possible role in tumor progression.

REFERENCES

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2. Buanne, P., Incerti, B., Guardavaccaro, D., Avvantaggiato, V., Simeone, A. and Tirone, F. 1998. Cloning of the human interferon-related developmental regulator (IFRD1) gene coding for the PC4 protein, a member of a novel family of developmentally regulated genes. Genomics 51: 233-242.
3. Lerman, M.I. and Minna, J.D. 2000. The 630-kb lung cancer homozygous deletion region on human chromosome 3p21.3: identification and evaluation of the resident candidate tumor suppressor genes. The international lung cancer chromosome 3p21.3 tumor suppressor gene consortium. Cancer Res. 60: 6116-6133.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602725. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Vadivelu, S.K., Kurzbauer, R., Dieplinger, B., Zweyer, M., Schafer, R., Wernig, A., Vietor, I. and Huber, L.A. 2004. Muscle regeneration and myogenic differentiation defects in mice lacking TIS7. Mol. Cell. Biol. 24: 3514-3525.

CHROMOSOMAL LOCATION

Genetic locus: IFRD2 (human) mapping to 3p21.31.

PRODUCT

IFRD2 siRNA (h) is a pool of 2 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 IFRD2 shRNA Plasmid (h): sc-78013-SH and IFRD2 shRNA (h) Lentiviral Particles: sc-78013-V as alternate gene silencing products.

For independent verification of IFRD2 (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-78013A and sc-78013B.

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

IFRD2 siRNA (h) is recommended for the inhibition of IFRD2 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

IFRD2 (DD-Z): sc-101071 is recommended as a control antibody for monitoring of IFRD2 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 IFRD2 gene expression knockdown using RT-PCR Primer: IFRD2 (h)-PR: sc-78013-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.