

SBNO2 siRNA (h): sc-97340

BACKGROUND

SBNO2 (protein strawberry notch homolog 2) is a 1,366 amino acid protein that belongs to the SBNO family. Detected in macrophages, SBNO2 seems to have transcriptional repression activity. SBNO2 and ETV3 are components of the pathways that contribute to the downstream anti-inflammatory effects of IL-10. The expression of SBNO2 is regulated by IL-10 in a STAT3-dependent way. Existing as two alternatively spliced isoforms, the SBNO2 gene is conserved in chimpanzee, dog, cow, mouse, rat, chicken, zebrafish and *C. elegans*, and maps to human chromosome 19p13.3. GPx-4 and LKB1 are neighbors of SBNO2 on chromosome 19. Chromosome 19 consists of approximately 63 million bases and makes up over 2% of human genomic DNA. Key genes for eye color and hair color also map to chromosome 19. Peutz-Jeghers syndrome, spinocerebellar ataxia type 6, the stroke disorder CADASIL, hypercholesterolemia and Insulin-dependent diabetes have been linked to chromosome 19.

REFERENCES

1. Moodie, S.J., et al. 2002. Analysis of candidate genes on chromosome 19 in coeliac disease: an association study of the KIR and LILR gene clusters. *Eur. J. Immunogenet.* 29: 287-291.
2. Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. *Nature* 428: 529-535.
3. El Kasmi, K.C., et al. 2007. Cutting edge: A transcriptional repressor and corepressor induced by the STAT3-regulated anti-inflammatory signaling pathway. *J. Immunol.* 179: 7215-7219.
4. Vekelis, M., et al. 2007. A novel CADASIL-causing mutation in a stroke patient. *Swiss Med. Wkly.* 137: 323-325.
5. Papp, J., et al. 2010. High prevalence of germline STK11 mutations in Hungarian Peutz-Jeghers Syndrome patients. *BMC Med. Genet.* 11: 169.
6. McCabe, M.T., et al. 2010. Homozygous deletion of the STK11/LKB1 locus and the generation of novel fusion transcripts in cervical cancer cells. *Cancer Genet. Cytogenet.* 197: 130-141.

CHROMOSOMAL LOCATION

Genetic locus: SBNO2 (human) mapping to 19p13.3.

PRODUCT

SBNO2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SBNO2 shRNA Plasmid (h): sc-97340-SH and SBNO2 shRNA (h) Lentiviral Particles: sc-97340-V as alternate gene silencing products.

For independent verification of SBNO2 (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-97340A, sc-97340B and sc-97340C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SBNO2 siRNA (h) is recommended for the inhibition of SBNO2 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 μ M in 66 μ l. 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

SBNO2 (A-3): sc-515634 is recommended as a control antibody for monitoring of SBNO2 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 SBNO2 gene expression knockdown using RT-PCR Primer: SBNO2 (h)-PR: sc-97340-PR (20 μ l). 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.