

SH3BGR siRNA (h): sc-61543

BACKGROUND

Proline-rich peptide sequences have been shown to play important roles in protein-protein interactions that occur in signal transduction pathways. SH3 domain binding glutamic acid-rich protein (SH3BGR), also designated 21-glutamic acid-rich protein (21-GARP), is a 239-amino acid protein differentially expressed in heart and skeletal muscle. Its proline-rich region contains the consensus sequence for an SH3-binding domain and its acidic C-terminal region contains a glutamic acid-rich domain which may assume a coiled-coil structure. SH3BGR may be part of a multimeric complex, as it contains two functional domains involved in protein-protein interactions. The SH3BGR gene maps proximal to HMG14 on chromosome 21q22.2.

REFERENCES

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- Mazzocco, M., et al. 2002. The identification of a novel human homologue of the SH3 binding glutamic acid-rich (SH3BGR) gene establishes a new family of highly conserved small proteins related to thioredoxin superfamily. *Gene* 291: 233-239.
- Majid, S.M., et al. 2005. The suppression of SH3BGR is important for v-Rel-mediated transformation. *Oncogene* 25: 756-768.
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- Yin, L., et al. 2005. Crystal structure of human SH3BGR1 protein: the first structure of the human SH3BGR family representing a novel class of thioredoxin fold proteins. *Proteins* 61: 213-216.
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CHROMOSOMAL LOCATION

Genetic locus: SH3BGR (human) mapping to 21q22.2.

PRODUCT

SH3BGR 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 SH3BGR shRNA Plasmid (h): sc-61543-SH and SH3BGR shRNA (h) Lentiviral Particles: sc-61543-V as alternate gene silencing products.

For independent verification of SH3BGR (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-61543A, sc-61543B and sc-61543C.

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

SH3BGR siRNA (h) is recommended for the inhibition of SH3BGR 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

SH3BGR (46.1): sc-100853 is recommended as a control antibody for monitoring of SH3BGR 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 SH3BGR gene expression knockdown using RT-PCR Primer: SH3BGR (h)-PR: sc-61543-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.

PROTOCOLS

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