SANTA CRUZ BIOTECHNOLOGY, INC.

SH3BGRL3 siRNA (h): sc-78714

BACKGROUND

SH3BGRL3 (SH3 domain binding glutamic acid-rich protein like 3) is a 93 amino acid ubiquitously expressed protein that belongs to the SH3BGR family as well as the thioredoxin (TRX) super family. Protein interactions involving SH3 domains have been implicated in signal transduction, cytoskeletal rearrangements, membrane trafficking, and other key cellular processes. The SH3BGRL3 protein contains one glutaredoxin domain. Localizing to cytoplasm and nucleus, SH3BGRL3 could act as a modulator of glutaredoxin biological activity. The SH3BGRL3 gene is conserved in canine, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 1q36.11. The chicken SH3BGRL3 protein shares 90 and 88% identity with the human and mouse proteins and shows a significant similarity to Glutaredoxin 1 of *Escherichia coli*.

REFERENCES

1. Mazzocco, M., et al. 2001. A novel human homologue of the SH3BGR gene encodes a small protein similar to Glutaredoxin 1 of *Escherichia coli*. Biochem. Biophys. Res. Commun. 285: 540-545.
2. Cesareni, G., et al. 2002. Can we infer peptide recognition specificity mediated by SH3 domains? FEBS Lett. 513: 38-44.
3. 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.
4. Nardini, M., et al. 2004. Crystal structure of the glutaredoxin-like protein SH3BGRL3 at 1.6 Angstrom resolution. Biochem. Biophys. Res. Commun. 318: 470-476.
5. Xu, C., et al. 2005. NMR structure and regulated expression in APL cell of human SH3BGRL3. FEBS Lett. 579: 2788-2794.
6. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
7. Majid, S.M., et al. 2006. The suppression of SH3BGRL is important for v-Rel-mediated transformation. Oncogene 25: 756-768.

CHROMOSOMAL LOCATION

Genetic locus: SH3BGRL3 (human) mapping to 1p36.11.

PRODUCT

SH3BGRL3 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 SH3BGRL3 shRNA Plasmid (h): sc-78714-SH and SH3BGRL3 shRNA (h) Lentiviral Particles: sc-78714-V as alternate gene silencing products.

For independent verification of SH3BGRL3 (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-78714A and sc-78714B.

RESEARCH USE

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

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

SH3BGRL3 siRNA (h) is recommended for the inhibition of SH3BGRL3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SH3BGRL3 gene expression knockdown using RT-PCR Primer: SH3BGRL3 (h)-PR: sc-78714-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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