SANTA CRUZ BIOTECHNOLOGY, INC.

SCGF siRNA (h): sc-106870

BACKGROUND

SCGF (stem cell growth factor), also known as C-type lectin domain family 11 member A, lymphocyte secreted long form of C-type lectin (LSLCL) or p47, is a cytokine for primitive hematopoietic progenitor cells and exhibits species-specific activity. It is predominantly expressed in proliferating chondrocytes, bone marrow cells, the periosteum and the perichondrium of skeletal tissues. SCGF contains an N-terminal Arg-Gly-Asp triplet (RGD triplet), leucine zipper domains, a C-terminal C-type lectin domain and numerous potential glycosylation sites. It has burst-promoting activity and granulocyte/macrophage colony-promoting activity *in vitro*. SCGF is directly correlated to granulocyte recovery following stem cell transplantation and thus can be an indicator of hematopoietic recovery following stem cell transplantation.

REFERENCES

1. Hiraoka, A., et al. 1987. Production of human hematopoietic survival and growth factor by a myeloid leukemia cell line (KPB-M15) and placenta as detected by a monoclonal antibody. Cancer Res. 47: 5025-5030.
2. Hiraoka, A., et al. 1997. Cloning, expression, and characterization of a cDNA encoding a novel human growth factor for primitive hematopoietic progenitor cells. Proc. Natl. Acad. Sci. USA 94: 7577-7582.
3. Mio, H., et al. 1998. Isolation and characterization of a cDNA for human mouse, and rat full length stem cell growth factor, a new member of C-type lectin superfamily. Biochem. Biophys. Res. Commun. 249: 124-130.
4. Hiraoka, A., et al. 1999. A human myeloid cell line producing stem cell growth factor, KPB-M15, secretes another growth factor active on murine hematopoietic progenitor cells. Acta Haematol. 100: 174-180.
5. Perrin, C., et al. 2002. Expression of LSLCL, a new C-type lectin, is closely restricted, in bone marrow, to immature neutrophils. C. R. Acad. Sci. III, Sci. Vie 324: 1125-1132.
6. Ando, K., et al. 2003. Serum stem cell growth factor for monitoring hematopoietic recovery following stem cell transplantation. Bone Marrow Transplant. 32: 391-398.
7. Lee, Y., et al. 2003. Synergistic activation of p70S6 kinase associated with stem cell factor in MO7e cells. Exp. Mol. Med. 35: 222-226.

CHROMOSOMAL LOCATION

Genetic locus: CLEC11A (human) mapping to 19q13.33.

PRODUCT

SCGF 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 SCGF shRNA Plasmid (h): sc-106870-SH and SCGF shRNA (h) Lentiviral Particles: sc-106870-V as alternate gene silencing products.

For independent verification of SCGF (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-106870A and sc-106870B.

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

SCGF siRNA (h) is recommended for the inhibition of SCGF 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 SCGF gene expression knockdown using RT-PCR Primer: SCGF (h)-PR: sc-106870-PR (20 µl, 421 bp). 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.