SANTA CRUZ BIOTECHNOLOGY, INC.

GROα siRNA (m): sc-72160

BACKGROUND

Chemokines are members of a superfamily of small, inducible, secreted, pro-inflammatory cytokines. Members of the chemokine family exhibit 20% to 50% homology in their predicted amino acid sequences and are divided into four subfamilies. In the C-X-C or α subfamily, the first two of four cysteine motifs are separated by another amino acid residue. The C-X-C chemokine subfamily includes IL-8, GROα/β/γ (and the murine homologs KC, MIP-2α and MIP-2β), platelet basic protein, ENA-78, GCP-2, PF4, IP-10 (and its murine homolog, CRG) and MIG.

REFERENCES

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2. Schall, T.J. 1991. Biology of the RANTES/SIS cytokine family. Cytokine 3: 165-183.
3. Miller, M.D. and Krangel, M.S. 1992. Biology and biochemistry of the chemokines: a family of chemotactic and inflammatory cytokines. Crit. Rev. Immunol. 12: 17-46.
4. Taub, D.D. and Oppenheim, J.J. 1993. Review of the chemokine meeting of the third international symposium of chemotactic cytokines. Cytokine 5: 175-179.
5. Roth, S.J., Carr, M.W. and Springer, T.A. 1995. C-C chemokines, but not the C-X-C chemokines interleukin-8 and interferon-γ inducible protein-10, stimulate transendothelial chemotaxis of T lymphocytes. Eur. J. Immunol. 25: 3482-3488.
6. Godiska, R., Chantry, D., Dietsch, G.N. and Gray, P.W. 1995. Chemokine expression in murine experimental allergic encephalomyelitis. J. Neuroimmunol. 58: 167-176.
7. Cook, D.N. 1996. The role of MIP-1α in inflammation and hematopoiesis. J. Leukoc. Biol. 59: 61-66.

CHROMOSOMAL LOCATION

Genetic locus: Cxcl1 (mouse) mapping to 5 E1.

PRODUCT

GROα siRNA (m) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GROα shRNA Plasmid (m): sc-72160-SH and GROα shRNA (m) Lentiviral Particles: sc-72160-V as alternate gene silencing products.

For independent verification of GROα (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72160A, sc-72160B and sc-72160C.

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

GROα siRNA (m) is recommended for the inhibition of GROα expression in mouse 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 GROα gene expression knockdown using RT-PCR Primer: GROα (m)-PR: sc-72160-PR (20 µl, 591 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Masuda, S., Tanaka, M., Inoue, T., Ohue-Kitano, R., Yamakage, H., Muranaka, K., Kusakabe, T., Shimatsu, A., Hasegawa, K. and Satoh-Asahara, N. 2018. Chemokine (C-X-C motif) ligand 1 is a myokine induced by palmitate and is required for myogenesis in mouse satellite cells. Acta Physiol. E-published.

RESEARCH USE

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