



Ly-6G siRNA (m): sc-148702

BACKGROUND

Ly-6G (lymphocyte antigen 6G) belongs to the Ly-6 family of glycosyl-phosphatidylinositol (GPI)-linked proteins. Ly-6 family members share amino acid homology throughout a distinctive cysteine rich protein domain that incorporates O-linked carbohydrates. Murine Ly-6 molecules have unique patterns of tissue expression during hematopoiesis from multipotential stem cells to lineage committed precursor cells, and on specific leukocyte subpopulations in the peripheral lymphoid tissues. Ly-6G contains one UPAR/Ly6 domain and is expressed almost exclusively on neutrophils localizing to the cell membrane. Ly-6G together with Ly-6C make up the Gr-1 antigen. The Gr-1 antigen is expressed on monocytes, neutrophils and a subset of macrophages, plasmacytoid dendritic cells and T cells. Cells expressing Gr-1 may play a role in the suppression of antitumor and T cell responses. Ly-6G is commonly used as a surface marker for neutrophils.

REFERENCES

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2. Fleming, T.J., et al. 1993. Selective expression of Ly-6G on myeloid lineage cells in mouse bone marrow. RB6-8C5 mAb to granulocyte-differentiation antigen (Gr-1) detects members of the Ly-6 family. *J. Immunol.* 151: 2399-2408.
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5. Su, Y., et al. 2005. Altered CXCR2 signaling in β -Arrestin-2-deficient mouse models. *J. Immunol.* 175: 5396-5402.
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7. Koo, G.C., et al. 2006. The innate interferon γ response of BALB/c and C57BL/6 mice to *in vitro* *Burkholderia pseudomallei* infection. *BMC Immunol.* 7: 19-19.
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CHROMOSOMAL LOCATION

Genetic locus: Ly6g (mouse) mapping to 15 D3.

PRODUCT

Ly-6G siRNA (m) is a target-specific 19-25 nt siRNA 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 Ly-6G shRNA Plasmid (m): sc-148702-SH and Ly-6G shRNA (m) Lentiviral Particles: sc-148702-V as alternate gene silencing 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

Ly-6G siRNA (m) is recommended for the inhibition of Ly-6G 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 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

Ly-6G (RB6-8C5): sc-53515 is recommended as a control antibody for monitoring of Ly-6G 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).

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.