**BACKGROUND**

Over 100 cell surface markers have been identified through the use of monoclonal antibodies. Many of these markers have proven useful in identifying a specific subpopulation of cells within a mixed colony. Accordingly, these molecules have been assigned a “cluster of differentiation” (CD) designation. T lymphocytes displaying the natural killer (NK) cell marker CD57 (also designated Leu7) on their cell surface are distinguishable from other T cell subsets by their granulocyte lymphocyte morphology and their clonal expansion in patients with AIDS and in recipients of bone marrow transplantation. CD57-positive cells have also been shown to localize to sites of certain tumors and large numbers of these cells are detected in the synovial fluid from patients suffering from rheumatoid arthritis.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: B3gat1 (mouse) mapping to 9 A4.

**PRODUCT**

CD57 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 CD57 shRNA Plasmid (m): sc-60690-SH and CD57 shRNA (m) Lentiviral Particles: sc-60690-V as alternate gene silencing products.

For independent verification of CD57 (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-60690A, sc-60690B and sc-60690C.

**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**

CD57 siRNA (m) is recommended for the inhibition of CD57 expression in mouse cells.

**SUPPORT REAGENTS**

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology’s siRNA Transfection Reagent: sc-29529 (0.3 ml), siRNA Transfection Medium: sc-36886 (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-38689, 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**

CD57 (NK-1): sc-6261 is recommended as a control antibody for monitoring of CD57 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® BP-HRP with UltraCruz® Western Blotting Luminol Reagent: sc-2008, UltraCruz® Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-1851, Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG® BP-RTIC 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 CD57 gene expression knockdown using RT-PCR Primer: CD57 (m)-PR: sc-60690-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.