



Hemogen siRNA (h): sc-61859

BACKGROUND

Hemogen (Hemopoietic gene protein, Erythroid differentiation-associated gene protein) is a 484 amino acid protein encoded by the human gene HEMGN. Hemogen is a nuclear protein that is expressed in hematopoietic precursor cells and can be detected in CD34⁺ and K-562 leukemia cell line. It is also expressed in bone marrow, testis, thymus and thyroid tumors, non-Hodgkin lymphoma, various leukemia cell lines, peripheral blood mononuclear cells (PBMCs) and bone marrow mononuclear cells (BMMCs) of patients with leukemia. Hemogen is down-regulated during megakaryocytic differentiation of K-562 cells by 12-O-tetradecanoylphorbol-13-acetate (TPA) (at protein level). It can be up-regulated in normal PBMCs by mitogens.

REFERENCES

1. Yang, L.V., et al. 2001. Hemogen is a novel nuclear factor specifically expressed in mouse hematopoietic development and its human homologue EDAG maps to chromosome 9q22, a region containing breakpoints of hematological neoplasms. *Mech. Dev.* 104: 105-111.
2. Lü, J., et al. 2002. Isolation and characterization of EDAG-1, a novel gene related to regulation in hematopoietic system. *Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao* 33: 641-646.
3. Lü, J., et al. 2002. Overexpression of EDAG-1 in NIH/3T3 cells leads to malignant transformation. *Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao* 34: 95-98.
4. Yang, L.V., et al. 2003. Alternative promoters and polyadenylation regulate tissue-specific expression of Hemogen isoforms during hematopoiesis and spermatogenesis. *Dev. Dyn.* 228: 606-616.
5. Li, C.Y., et al. 2004. EDAG regulates the proliferation and differentiation of hematopoietic cells and resists cell apoptosis through the activation of nuclear factor- κ B. *Cell Death Differ.* 11: 1299-1308.

CHROMOSOMAL LOCATION

Genetic locus: HEMGN (human) mapping to 9q22.33.

PRODUCT

Hemogen siRNA (h) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Hemogen shRNA Plasmid (h): sc-61859-SH and Hemogen shRNA (h) Lentiviral Particles: sc-61859-V as alternate gene silencing products.

For independent verification of Hemogen (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-61859A, sc-61859B and sc-61859C.

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 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

Hemogen siRNA (h) is recommended for the inhibition of Hemogen 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 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

Hemogen (C-7): sc-393416 is recommended as a control antibody for monitoring of Hemogen 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 κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) 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 Hemogen gene expression knockdown using RT-PCR Primer: Hemogen (h)-PR: sc-61859-PR (20 μ l). 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.