SANTA CRUZ BIOTECHNOLOGY, INC.

Fgl2 siRNA (m): sc-44692

BACKGROUND

Fibrinogen-like protein 2 (Fgl2), also known as fibroleukin, is secreted by T cells and is involved in diseases in which thrombosis plays a pivotal role, such as virus-induced fulminant hepatitis, fetal loss syndrome, and xenograft rejection. Constitutively expressed in cytotoxic T-cells, Fgl2 exerts immunosuppressive effects on both T cell proliferation and dendritic cell maturation. Fgl2 is a serine protease and directly cleaves prothrombin to thrombin. Fgl2 functions in the pathogenesis of diseases including viral-induced hepatitis and Th1 cytokine-induced fetal loss syndrome.

REFERENCES

1. Ning, Q., et al. 1999. The nucleocapsid protein of murine hepatitis virus type 3 induces transcription of the novel Fgl2 prothrombinase gene. J. Biol. Chem. 274: 9930-9936.
2. Yuwaraj, S., et al. 2001. Genomic characterization, localization, and functional expression of Fgl2, the human gene encoding fibroleukin: a novel human procoagulant. Genomics 71: 330-338.
3. Chan, C.W., et al. 2003. Soluble fibrinogen-like protein 2/fibroleukin exhibits immunosuppressive properties: suppressing T cell proliferation and inhibiting maturation of bone marrow-derived dendritic cells. J. Immunol. 170: 4036-4044.
4. Ning, Q., et al. 2003. Induction of prothrombinase Fgl2 by the nucleocapsid protein of virulent mouse hepatitis virus is dependent on host hepatic nuclear factor-4 α. J. Biol. Chem. 278: 15541-15549.
5. Olson, G.E., et al. 2004. Region-specific expression and secretion of the fibrinogen-related protein, Fgl2, by epithelial cells of the hamster epididymis and its role in disposal of defective spermatozoa. J. Biol. Chem. 279: 51266-51274.
6. Ghanekar, A., et al. 2004. Endothelial induction of Fgl2 contributes to thrombosis during acute vascular xenograft rejection. J. Immunol. 172: 5693-5701.

CHROMOSOMAL LOCATION

Genetic locus: Fgl2 (mouse) mapping to 5 A3.

PRODUCT

Fgl2 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 Fgl2 shRNA Plasmid (m): sc-44692-SH and Fgl2 shRNA (m) Lentiviral Particles: sc-44692-V as alternate gene silencing products.

For independent verification of Fgl2 (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-44692A, sc-44692B and sc-44692C.

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

Fgl2 siRNA (m) is recommended for the inhibition of Fgl2 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.

GENE EXPRESSION MONITORING

Fgl2 (4H5): sc-100276 is recommended as a control antibody for monitoring of Fgl2 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 Fgl2 gene expression knockdown using RT-PCR Primer: Fgl2 (m)-PR: sc-44692-PR (20 µl, 517 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.