



Factor V siRNA (m): sc-40400

BACKGROUND

Hemostasis following tissue injury involves the deployment of essential plasma procoagulants (prothrombin, and factors X, IX, V, and VIII), which are involved in a blood coagulation cascade that leads to the formation of insoluble fibrin clots and the promotion of platelet aggregation. Coagulation factor V (Factor V, FV, proaccelerin, labile factor) is a 2,196 amino acid, single chain glycoprotein that is cleaved by thrombin to yield an active, Ca^{2+} dependent dimer. This heterodimer is essential to the blood coagulation cascade. Together with catalytic Factor Xa and Ca^{2+} on the surface of platelets or endothelial cells, Factor Va coordinates in a prothrombinase complex, which mediates proteolysis of prothrombin into active thrombin. Due to both the procoagulant properties of Factor V in coordinating proteolytic activation of thrombin, and anticoagulant properties as a cofactor to activated protein C (APC), which selectively destroys FVa and FXa, alterations at the Factor V locus can contribute to hemorrhagic diathesis or thrombosis, respectively.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: F5 (mouse) mapping to 1 H2.2.

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.

PRODUCT

Factor V 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 Factor V shRNA Plasmid (m): sc-40400-SH and Factor V shRNA (m) Lentiviral Particles: sc-40400-V as alternate gene silencing products.

For independent verification of Factor V (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-40400A, sc-40400B and sc-40400C.

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

Factor V siRNA (m) is recommended for the inhibition of Factor V 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 Factor V gene expression knockdown using RT-PCR Primer: Factor V (m)-PR: sc-40400-PR (20 μl). Annealing temperature for the primers should be $55-60^{\circ}\text{C}$ and the extension temperature should be $68-72^{\circ}\text{C}$.