SANTA CRUZ BIOTECHNOLOGY, INC.

FOXJ1 siRNA (m): sc-62336

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The Power to Question

BACKGROUND

Forkhead-box J1 (FOXJ1) is a 421-amino acid transcription factor that suppresses T cell activity and thus spontaneous autoimmunity, through the repression of NFκB activity. FOXJ1 also inhibits the humoral immune response in B cells; FOXJ1 deficiency in B cells results in spontaneous and accentuated germinal center formation, implicated in the development of pathogenic autoantibodies and accentuated responses to immunizations. Abnormal expression of FOXJ1 may be associated with autoimmune diseases and/or other inflammatory diseases. FOXJ1 is also required for cilia formation and left-right axis determination because it increases calpastatin expression, a protein necessary for the ability of basal bodies to anchor to the apical cytoskeleton. FOXJ1 expression may function as an early marker of epithelial cell differentiation, recovery, and function.

REFERENCES

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4. Gomperts, B.N., et al. 2004. FOXJ1 regulates basal body anchoring to the cytoskeleton of ciliated pulmonary epithelial cells. J. Cell Sci. 117: 1329-1337.
5. Zhang, M., et al. 2004. FOXJ1 regulates asymmetric gene expression during left-right axis patterning in mice. Biochem. Biophys. Res. Commun. 324: 1413-1420.
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7. Srivatsan, S., et al. 2005. Cutting edge: FOXJ1 protects against autoimmunity and inhibits thymocyte egress. J. Immunol. 175: 7805-7809.
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CHROMOSOMAL LOCATION

Genetic locus: Foxj1 (mouse) mapping to 11 E2.

PRODUCT

FOXJ1 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 FOXJ1 shRNA Plasmid (m): sc-62336-SH and FOXJ1 shRNA (m) Lentiviral Particles: sc-62336-V as alternate gene silencing products.

For independent verification of FOXJ1 (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-62336A, sc-62336B and sc-62336C.

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

FOXJ1 siRNA (m) is recommended for the inhibition of FOXJ1 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

FOXJ1 (3-19): sc-53139 is recommended as a control antibody for monitoring of FOXJ1 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 FOXJ1 gene expression knockdown using RT-PCR Primer: FOXJ1 (m)-PR: sc-62336-PR (20 µl). 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.