

SKAP55 siRNA (m): sc-153475

BACKGROUND

Fyb (Fyn binding protein) and the anchoring proteins SKAP55 and SKAP55-R (SKAP55-related protein) associate with the tyrosine kinase p59Fyn. SKAP55 and SKAP55-R bind to Fyb through their SH3 domains and function as substrates for p59Fyn in resting T cells. SKAP55 contains an N-terminal Pleckstrin homology domain and a C-terminal SH3 domain binding motif of adjacent arginine and lysine residues followed by tandem tyrosines (i.e. RKxxYxxY). SKAP55-R, similar in overall structure to SKAP55, contains a coiled-coil N-terminal domain. SKAP55 associates with SLAP-130, another component of the Fyn complex, which plays a role in the regulation of signaling events initiated by lymphocyte antigen receptors leading up to T cell activation. The human SKAP55 gene maps to chromosome 17q21.32 and encodes a 359 amino acid protein.

REFERENCES

1. Marie-Cardine, A., Bruyns, E., Eckerskorn, C., Kirchgessner, H., Meuer, S.C. and Schraven, B. 1997. Molecular cloning of SKAP55, a novel protein that associates with the protein tyrosine kinase p59Fyn in human T-lymphocytes. *J. Biol. Chem.* 272: 16077-16080.
2. Marie-Cardine, A., Hendricks-Taylor, L.R., Boerth, N.J., Zhao, H., Schraven, B. and Koretzky, G.A. 1998. Molecular interaction between the Fyn-associated protein SKAP55 and the SLP-76-associated phosphoprotein SLAP-130. *J. Biol. Chem.* 273: 25789-25795.
3. Liu, J., Kang, H., Raab, M., da Silva, A.J., Kraeft, S.K. and Rudd C.E. 1998. Fyb (Fyn binding protein) serves as a binding partner for lymphoid protein and Fyn kinase substrate SKAP55 and a SKAP55-related protein in T cells. *Proc. Natl. Acad. Sci. USA* 95: 8779-8784.
4. Peterson, E.J., Clements, J.L., Fang, N. and Koretzky, G.A. 1998. Adaptor proteins in lymphocyte antigen-receptor signaling. *Curr. Opin. Immunol.* 10: 337-344.
5. Marie-Cardine, A., Kirchgessner, H. and Schraven, B. 1999. Molecular alterations of the Fyn-complex occur as late events of human T cell activation. *Eur. J. Immunol.* 29: 1175-1187.

CHROMOSOMAL LOCATION

Genetic locus: Skap1 (mouse) mapping to 11 D.

PRODUCT

SKAP55 siRNA (m) is a pool of 2 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 SKAP55 shRNA Plasmid (m): sc-153475-SH and SKAP55 shRNA (m) Lentiviral Particles: sc-153475-V as alternate gene silencing products.

For independent verification of SKAP55 (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-153475A and sc-153475B.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

SKAP55 siRNA (m) is recommended for the inhibition of SKAP55 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 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

SKAP55 (35): sc-136068 is recommended as a control antibody for monitoring of SKAP55 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SKAP55 gene expression knockdown using RT-PCR Primer: SKAP55 (m)-PR: sc-153475-PR (20 μ l). 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.