SANTA CRUZ BIOTECHNOLOGY, INC.

Rab 13 siRNA (h): sc-44060

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the R-Ras, Rap, Ral/Rec and Rho/Rab superfamilies, exhibits 30-60% homology with Ras p21. Accumulating data suggests an important role for Rab proteins, either in endocytosis or in biosynthetic protein transport. The Rab family of small G proteins play an important role in determining the specificity of vesicular transport pathways. Rab 13 and Rab 3B localize to tight junctions in epithelial cells and to cytoplasmic vesicular structures in cells lacking tight junctions. Rab 13 can be detected in the junctional complex regions of a variety of epithelia, including intestine, kidney and liver.

REFERENCES

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5. Sheth, B., et al. 2000. Differentiation of the epithelial apical junctional complex during mouse preimplantation development: a role for Rab 13 in the early maturation of the tight junction. Mech. Dev. 97: 93-104.
6. Yamamoto, Y., et al. 2003. Distinct roles of Rab 3B and Rab 13 in the polarized transport of apical, basolateral and tight junctional membrane proteins to the plasma membrane. Biochem. Biophys. Res. Commun. 308: 270-275.
7. Morimoto, S., et al. 2005. Rab 13 mediates the continuous endocytic recycling of occludin to the cell surface. J. Biol. Chem. 280: 2220-2228.
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CHROMOSOMAL LOCATION

Genetic locus: RAB13 (human) mapping to 1q21.3.

PRODUCT

Rab 13 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Rab 13 shRNA Plasmid (h): sc-44060-SH and Rab 13 shRNA (h) Lentiviral Particles: sc-44060-V as alternate gene silencing products.

For independent verification of Rab 13 (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-44060A, sc-44060B and sc-44060C.

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

Rab 13 siRNA (h) is recommended for the inhibition of Rab 13 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 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

Rab 13 (8E8E2): sc-517224 is recommended as a control antibody for monitoring of Rab 13 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 Rab 13 gene expression knockdown using RT-PCR Primer: Rab 13 (h)-PR: sc-44060-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.