SANTA CRUZ BIOTECHNOLOGY, INC.

Rab11-FIP1 siRNA (m): sc-76332

BACKGROUND

Rab11-FIP1 (Rab 11 family-interacting protein 1), also known as Rab-coupling protein (RCP), is a 1283 amino acid Rab 11 effector protein. Rab11-FIP1, by interacting with Rab GTPases, is involved in the endosomal recycling process and may play a role in controlling membrane trafficking along the phagocytic pathway and during phagocytosis. Localized to the recycling endosome, the cytoplasmic membrane and phagosome membranes, Rab11-FIP1 is expressed as five isoforms produced by alternative splicing. As the most highly expressed isoform, isoform two of Rab11-FIP1 is expressed in brain, lung, testis, small intestine, spleen and heart. Isoform two of Rab11-FIP1 also has been found to form a homooligomer and is believed to interact with many Rab GTPases, including Rab 4A, Rab 11A, Rab 11B and Rab 25.

REFERENCES

1. Cullis, D.N., et al. 2002. Rab11-FIP2, an adaptor protein connecting cellular components involved in internalization and recycling of epidermal growth factor receptors. J. Biol. Chem. 277: 49158-49166.
2. Lindsay, A.J., et al. 2004. Characterisation of the Rab binding properties of Rab coupling protein (RCP) by site-directed mutagenesis. FEBS Lett. 571: 86-92.
3. Peden, A.A., et al. 2004. The RCP-Rab11 complex regulates endocytic protein sorting. Mol. Biol. Cell 15: 3530-3541.
4. Damiani, M.T., et al. 2004. Rab coupling protein associates with phagosomes and regulates recycling from the phagosomal compartment. Traffic 5: 785-797.
5. Marie, N., et al. 2005. Rab coupling protein is selectively degraded by calpain in a Ca^{2+}-dependent manner. Biochem. J. 389: 223-231.
6. Letessier, A., et al. 2006. Frequency, prognostic impact, and subtype association of 8p12, 8q24, 11q13, 12p13, 17q12, and 20q13 amplifications in breast cancers. BMC Cancer 6: 245.
7. Jin, M., et al. 2006. The Rab11-FIP1/RCP gene codes for multiple protein transcripts related to the plasma membrane recycling system. Biochim. Biophys. Acta 1759: 281-295.

CHROMOSOMAL LOCATION

Genetic locus: Rab11fip1 (mouse) mapping to 8 A2.

PRODUCT

Rab11-FIP1 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 Rab11-FIP1 shRNA Plasmid (m): sc-76332-SH and Rab11-FIP1 shRNA (m) Lentiviral Particles: sc-76332-V as alternate gene silencing products.

For independent verification of Rab11-FIP1 (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-76332A, sc-76332B and sc-76332C.

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

Rab11-FIP1 siRNA (m) is recommended for the inhibition of Rab11-FIP1 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

Rab11-FIP1 (3A12H9D2): sc-517228 is recommended as a control antibody for monitoring of Rab11-FIP1 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 Rab11-FIP1 gene expression knockdown using RT-PCR Primer: Rab11-FIP1 (m)-PR: sc-76332-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.