SANTA CRUZ BIOTECHNOLOGY, INC.

YIPF5 siRNA (h): sc-91757

BACKGROUND

The YIP1 family consists of a group of small membrane proteins that bind Rab GTPases and function in membrane trafficking and vesicle biogenesis. YIPF5 (YIP1 family member 5), also known as FinGER5, SB140, SMAP5 (smooth muscle cell-associated protein 5) or YIP1A (YPT-interacting protein 1 A), is a 257 amino acid multi-pass membrane protein of the endoplasmic reticulum, Golgi apparatus and cytoplasmic vesicle. Belonging to the YIP1 family and existing as three alternatively spliced isoforms, YIPF5 is ubiquitously expressed but found at high levels in coronary smooth muscles, kidney, small intestine, liver and skeletal muscle. YIPF5 is involved in retrograde transport from the Golgi apparatus to the endoplasmic reticulum, and interacts with YIF1A, SEC23, Sec24 and possibly Rab 1A. YIPF5 is induced by TGFβ1 and is encoded by a gene located on human chromosome 5.

REFERENCES

1. Tang, B.L., et al. 2001. A membrane protein enriched in endoplasmic reticulum exit sites interacts with COPII. J. Biol. Chem. 276: 40008-40017.
2. Jin, C., et al. 2005. Human YIPA specifies the localization of Yif1 to the Golgi apparatus. Biochem. Biophys. Res. Commun. 334: 16-22.
3. Stolle, K., et al. 2005. Cloning, cellular localization, genomic organization, and tissue-specific expression of the TGFβ1-inducible SMAP-5 gene. Gene 351: 119-130.
4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611483. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Yoshida, Y., et al. 2008. YIPF5 and YIF1A recycle between the ER and the Golgi apparatus and are involved in the maintenance of the Golgi structure. Exp. Cell Res. 314: 3427-3443.
6. Kano, F., et al. 2009. YIP1A regulates the COPI-independent retrograde transport from the Golgi complex to the ER. J. Cell Sci. 122: 2218-2227.

CHROMOSOMAL LOCATION

Genetic locus: YIPF5 (human) mapping to 5q31.3.

PRODUCT

YIPF5 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 YIPF5 shRNA Plasmid (h): sc-91757-SH and YIPF5 shRNA (h) Lentiviral Particles: sc-91757-V as alternate gene silencing products.

For independent verification of YIPF5 (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-91757A, sc-91757B and sc-91757C.

PROTOCOLS

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

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

YIPF5 siRNA (h) is recommended for the inhibition of YIPF5 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor YIPF5 gene expression knockdown using RT-PCR Primer: YIPF5 (h)-PR: sc-91757-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.