SANTA CRUZ BIOTECHNOLOGY, INC.

cytohesin-4 siRNA (m): sc-62189

BACKGROUND

Cytohesin-4, also known as CYT4 or PSCD4 (pleckstrin homology, Sec7 and coiled-coil domains 4), is a 394 amino acid ADP-ribosylation factor (ARF) that functions as a guanine nucleotide-exchange protein (GEP). Expressed primarily in blood leukocytes with minimal expression observed in the thymus and spleen, cytohesin-4 has a C-terminal pleckstrin homology (PH) domain, an N-terminal coiled-coil motif and a central Sec7 domain. The PH domain is responsible for membrane and phospholipid interaction, while the coiled-coil motif mediates homodimerization. The Sec7 domain of cytohesin-4 exhibits the GEP activity which, *in vitro,* can promote guanine nucleotide-exchange with both ARF1 and ARF5.

REFERENCES

1. Ogasawara, M., et al. 2000. Similarities in function and gene structure of cytohesin-4 and cytohesin-1, guanine nucleotide-exchange proteins for ADP-ribosylation factors. J. Biol. Chem. 275: 3221-3230.
2. Suzuki, I., et al. 2002. Localization of mRNAs for subfamily of guanine nucleotide-exchange proteins (GEP) for ARFs (ADP-ribosylation factors) in the brain of developing and mature rats under normal and postaxotomy conditions. Brain Res. Mol. Brain Res. 98: 41-50.
3. Mansour, M., et al. 2002. The N-terminal coiled coil domain of the cytohesin/ARNO family of guanine nucleotide exchange factors interacts with the scaffolding protein CASP. J. Biol. Chem. 277: 32302-32309.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606514. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Hofmann, I., et al. 2007. The Arl4 family of small G proteins can recruit the cytohesin Arf6 exchange factors to the plasma membrane. Curr. Biol. 17: 711-716.

CHROMOSOMAL LOCATION

Genetic locus: Cyth4 (mouse) mapping to 15 E1.

PRODUCT

cytohesin-4 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 cytohesin-4 shRNA Plasmid (m): sc-62189-SH and cytohesin-4 shRNA (m) Lentiviral Particles: sc-62189-V as alternate gene silencing products.

For independent verification of cytohesin-4 (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-62189A, sc-62189B and sc-62189C.

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

cytohesin-4 siRNA (m) is recommended for the inhibition of cytohesin-4 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor cytohesin-4 gene expression knockdown using RT-PCR Primer: cytohesin-4 (m)-PR: sc-62189-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.