SANTA CRUZ BIOTECHNOLOGY, INC.

Eps8L1 siRNA (h): sc-97584

BACKGROUND

Eps8L1 (EPS8-like 1), also known as DRC3 or EPS8R1, is a 723 amino acid protein that localizes to the cytoplasm and belongs to the Eps8 (epidermal growth factor receptor pathway substrate 8) family. Expressed in placental tissue, Eps8L1 functions to stimulate the guanine exchange activity of Sos 1 (son of sevenless homolog 1), a protein that promotes the exchange of Ras-bound GDP for GTP. Additionally, Eps8L1 is thought to associate with Actin and, via this association, may play a role in membrane ruffling and remodeling of the Actin cytoskeleton. Through its ability to regulate protein activation and cytoskeleton dynamics, Eps8L1 may participate in cell growth and differentiation events within the cell. Eps8L1 contains one SH3 domain and is expressed as four isoforms due to alternative splicing events.

REFERENCES

1. Pawson, T., et al. 1993. SH2 and SH3 domains. Curr. Biol. 3: 434-442.
2. Tocchetti, A., et al. 2003. In silico analysis of the EPS8 gene family: genomic organization, expression profile, and protein structure. Genomics 81: 234-244.
3. Offenhäuser, N., et al. 2004. The eps8 family of proteins links growth factor stimulation to actin reorganization generating functional redundancy in the Ras/Rac pathway. Mol. Biol. Cell 15: 91-98.
4. Goicoechea, S., et al. 2006. Palladin binds to Eps8 and enhances the formation of dorsal ruffles and podosomes in vascular smooth muscle cells. J. Cell Sci. 119: 3316-3324.
5. Maa, M.C., et al. 2007. Eps8 facilitates cellular growth and motility of colon cancer cells by increasing the expression and activity of focal adhesion kinase. J. Biol. Chem. 282: 19399-19409.
6. Würtz, P., et al. 2007. Simultaneous detection of amide and methyl correlations using a time shared NMR experiment: application to binding epitope mapping. J. Biomol. NMR 39: 97-105.
7. Kesti, T., et al. 2007. Reciprocal regulation of SH3 and SH2 domain binding via tyrosine phosphorylation of a common site in CD3ε. J. Immunol. 179: 878-885.

CHROMOSOMAL LOCATION

Genetic locus: EPS8L1 (human) mapping to 19q13.42.

PRODUCT

Eps8L1 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 Eps8L1 shRNA Plasmid (h): sc-97584-SH and Eps8L1 shRNA (h) Lentiviral Particles: sc-97584-V as alternate gene silencing products.

For independent verification of Eps8L1 (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-97584A, sc-97584B and sc-97584C.

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

Eps8L1 siRNA (h) is recommended for the inhibition of Eps8L1 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 Eps8L1 gene expression knockdown using RT-PCR Primer: Eps8L1 (h)-PR: sc-97584-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.