SANTA CRUZ BIOTECHNOLOGY, INC.

Eps8L2 siRNA (h): sc-96954

BACKGROUND

Eps8L2 (epidermal growth factor receptor kinase substrate 8-like protein 2), also known as EPS8R2 or PP13181, is a 715 amino acid protein that localizes to the cytoplasm and belongs to the Eps8 (epidermal growth factor receptor pathway substrate 8) family. Expressed in placenta and fibroblasts, Eps8L2 functions to stimulate the guanine exchange activity of Sos 1 (son of seven-less homolog 1), a protein that promotes the exchange of Ras-bound GDP for GTP. Additionally, Eps8L2 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, Eps8L2 may participate in cell growth and differentiation events within the cell. Eps8L2, a protein that is expressed as two isoforms due to alternative splicing, contains one PID (phosphotyrosine interaction) domain and one SH3 domain.

REFERENCES

1. Tocchetti, A., et al. 2003. In silico analysis of the EPS8 gene family: genomic organization, expression profile, and protein structure. Genomics 81: 234-244.
2. 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.
3. Wang, X., et al. 2007. Manipulation of thyroid status and/or GH injection alters hepatic gene expression in the juvenile chicken. Cytogenet. Genome Res. 117: 174-188.
4. 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.
5. Tang, L.Y., et al. 2007. Quantitative phosphoproteome profiling of Wnt3a-mediated signaling network: indicating the involvement of ribonucleoside-diphosphate reductase M2 subunit phosphorylation at residue serine 20 in canonical Wnt signal transduction. Mol. Cell Proteomics 6: 1952-1967.

CHROMOSOMAL LOCATION

Genetic locus: EPS8L2 (human) mapping to 11p15.5.

PRODUCT

Eps8L2 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 Eps8L2 shRNA Plasmid (h): sc-96954-SH and Eps8L2 shRNA (h) Lentiviral Particles: sc-96954-V as alternate gene silencing products.

For independent verification of Eps8L2 (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-96954A, sc-96954B and sc-96954C.

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

Eps8L2 siRNA (h) is recommended for the inhibition of Eps8L2 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

Eps8L2 (F-8): sc-514673 is recommended as a control antibody for monitoring of Eps8L2 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 Eps8L2 gene expression knockdown using RT-PCR Primer: Eps8L2 (h)-PR: sc-96954-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.