SANTA CRUZ BIOTECHNOLOGY, INC.

EPB41L5 siRNA (h): sc-105332

BACKGROUND

FERM domains are roughly 150 amino acids in length and are found in a number of cytoskeletal-associated proteins such as Ezrin, Radixin, Moesin and 4.1 (erythrocyte membrane protein band 4.1), where they provide a link between cytoskeletal signals and membrane dynamics. EPB41L5 (erythrocyte membrane protein band 4.1 like 5), also known as BE37 or YMO1, is a 733 amino acid cytoplasmic protein that contains one FERM domain, which it uses to bind CRB1 (crumbs homolog 1). EPB41L5 is a homolog of zebrafish "mosaic eyes" (moe), and is widely expressed but found at highest levels in ovary, kidney and brain, and is known to colocalize with β-catenin. EPB41L5 may participate in tight junction positioning during the establishment of epithelial cell polarity, and exists as four alternatively spliced isoforms that are encoded by a gene located on human chromosome 2q14.2.

REFERENCES

1. Jensen, A.M., et al. 2001. mosaic eyes: a zebrafish gene required in pigmented epithelium for apical localization of retinal cell division and lamination. Development 128: 95-105.
2. Medina, E., et al. 2002. Role of the Crumbs complex in the regulation of junction formation in *Drosophila* and mammalian epithelial cells. Biol. Cell 94: 305-313.
3. Jensen, A.M. and Westerfield, M. 2004. Zebrafish mosaic eyes is a novel FERM protein required for retinal lamination and retinal pigmented epithelial tight junction formation. Curr. Biol. 14: 711-717.
4. Hsu, Y.C., et al. 2006. Mosaic eyes is a novel component of the Crumbs complex and negatively regulates photoreceptor apical size. Development 133: 4849-4859.
5. Gosens, I., et al. 2007. FERM protein EPB41L5 is a novel member of the mammalian CRB-MPP5 polarity complex. Exp. Cell Res. 313: 3959-3970.
6. Rizzolo, L.J. 2007. Development and role of tight junctions in the retinal pigment epithelium. Int. Rev. Cytol. 258: 195-234.

CHROMOSOMAL LOCATION

Genetic locus: EPB41L5 (human) mapping to 2q14.2.

PRODUCT

EPB41L5 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 EPB41L5 shRNA Plasmid (h): sc-105332-SH and EPB41L5 shRNA (h) Lentiviral Particles: sc-105332-V as alternate gene silencing products.

For independent verification of EPB41L5 (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-105332A, sc-105332B and sc-105332C.

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

EPB41L5 siRNA (h) is recommended for the inhibition of EPB41L5 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

EPB41L5 (F-9): sc-515440 is recommended as a control antibody for monitoring of EPB41L5 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 EPB41L5 gene expression knockdown using RT-PCR Primer: EPB41L5 (h)-PR: sc-105332-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.