SANTA CRUZ BIOTECHNOLOGY, INC.

Sciellin siRNA (m): sc-61502

BACKGROUND

Sciellin (SCEL) is a precursor protein of the keratinocyte cornified envelope which is formed beneath the inner surface of the cell membrane during terminal differentiation. The central domain of Sciellin contains 16 repeats of approximately 20 amino acids each that are rich in putative transglutaminase substrates (glutamine and lysine). The C-terminal region contains one LIM domain, a motif that is presumably involved in protein-protein interactions. Northern blot analysis shows Sciellin expression solely in esophagus tissue, and *in situ* hybridization of human foreskin sections exhibit expression in the upper stratum spinosum and the stratum granulosum. Sciellin also demonstrates peripheral cytoplasmic localization in the upper cell layers of the epidermis and in stratified squamous epithelia.

REFERENCES

1. Kvedar, J.C., et al. 1992. Characterization of Sciellin, a precursor to the cornified envelope of human keratinocytes. Differentiation 49: 195-204.
2. Champliaud, M.F., et al. 1998. cDNA c-keratinocyte cornified envelope. J. Biol. Chem. 273: 31547-31554.
3. Champliaud, M.F., et al. 2001. Gene characterization of Sciellin (SCEL) and protein localization in vertebrate epithelia displaying barrier properties. Genomics 70: 264-268.
4. Champliaud, M.F., et al. 2003. The expression of vitamin D-upregulated protein 1 in skin and its interaction with Sciellin in cultured keratinocytes. J. Invest. Dermatol. 121: 781-785.
5. Corona, W., et al. 2004. Analysis of Sciellin (SCEL) as a candidate gene in esophageal squamous cell carcinoma. Anticancer Res. 24: 1417-1419.
6. Alibardi, L., et al. 2005. Localization and characterization of specific cornification proteins in avian epidermis. Cells Tissues Organs 178: 204-215.
7. Baden, H.P., et al. 2005. Targeted deletion of the Sciellin gene resulted in normal development and maturation. Genesis 42: 219-228.

CHROMOSOMAL LOCATION

Genetic locus: Scel (mouse) mapping to 14 E2.3.

PRODUCT

Sciellin 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 Sciellin shRNA Plasmid (m): sc-61502-SH and Sciellin shRNA (m) Lentiviral Particles: sc-61502-V as alternate gene silencing products.

For independent verification of Sciellin (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-61502A, sc-61502B and sc-61502C.

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

Sciellin siRNA (m) is recommended for the inhibition of Sciellin 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 Sciellin gene expression knockdown using RT-PCR Primer: Sciellin (m)-PR: sc-61502-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.