SANTA CRUZ BIOTECHNOLOGY, INC.

epiplakin 1 siRNA (h): sc-77799

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Epiplakin 1, also known as EPPK1 or EPIPL, is a 5,065 amino acid protein that localizes to both the cytoplasm and the cytoskeleton and contains 65 plectin repeats. One of several members of the cytolinker family, epiplakin 1 is expressed at high levels in colon, liver, stomach, intestine and salivary glands and is encoded by a gene which maps to human chromosome 8. Consisting of nearly 146 million base pairs, chromosome 8 encodes over 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, Trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that maps to chromosome 8.

REFERENCES

1. Fujiwara, S., et al. 1996. Identification of a 450-kDa human epidermal autoantigen as a new member of the plectin family. J. Invest. Dermatol. 106: 1125-1130.
2. Wildenauer, D.B., et al. 1999. Chromosomes 8 and 10 workshop. Am. J. Med. Genet. 88: 239-243.
3. Kashino, G., et al. 2001. Preferential expression of an intact WRN gene in Werner syndrome cell lines in which a normal chromosome 8 has been introduced. Biochem. Biophys. Res. Commun. 289: 111-115.
4. Fujiwara, S., et al. 2001. Epiplakin, a novel member of the Plakin family originally identified as a 450-kDa human epidermal autoantigen. Structure and tissue localization. J. Biol. Chem. 276: 13340-13347.
5. Selicorni, A., et al. 2002. Cytogenetic mapping of a novel locus for type II Waardenburg syndrome. Hum. Genet. 110: 64-67.
6. Spazierer, D., et al. 2003. Epiplakin gene analysis in mouse reveals a single exon encoding a 725-kDa protein with expression restricted to epithelial tissues. J. Biol. Chem. 278: 31657-31666.
7. Takeo, N., et al. 2003. Structure and heterogeneity of the human gene for epiplakin (EPPK1). J. Invest. Dermatol. 121: 1224-1226.
8. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607553. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: EPPK1 (human) mapping to 8q24.3.

PRODUCT

epiplakin 1 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 epiplakin 1 shRNA Plasmid (h): sc-77799-SH and epiplakin 1 shRNA (h) Lentiviral Particles: sc-77799-V as alternate gene silencing products.

For independent verification of epiplakin 1 (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-77799A, sc-77799B and sc-77799C.

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

epiplakin 1 siRNA (h) is recommended for the inhibition of epiplakin 1 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 epiplakin 1 gene expression knockdown using RT-PCR Primer: epiplakin 1 (h)-PR: sc-77799-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Kokado, M., et al. 2016. Effects of epiplakin-knockdown in cultured corneal epithelial cells. BMC Res. Notes 9: 278.

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.