SANTA CRUZ BIOTECHNOLOGY, INC.

RELL2 siRNA (h): sc-92037

BACKGROUND

RELL2, also known as RELT-like protein 2 or receptor expressed in lymphoid tissues like 2, is a 303 amino acid protein that belongs to the RELT family. RELL2 is phosphorylated *in vitro* by OXSR1. RELL2 is primarily expressed in spleen, thymus, testis, peripheral blood leukocytes, brain and placenta, but is not expressed in prostate, ovary, small intestine, colon, heart, lung, liver, skeletal muscle, kidney and pancreas. RELL2 shares 27% and 40% amino acid identity with RELT and RELL1, respectively, and interacts with RELT, RELL1 and OXSR1 as well. The RELL2 gene is conserved in chimpanzee, canine, bovine, mouse, rat and chicken, and maps to human chromosome 5q31.3. Chromosome 5 makes up approximately 6% of the human genome, contains 181 million base pairs and encode 1,000 genes. Deletion of 5q or chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

1. Saltman, D.L., et al. 1993. A physical map of 15 loci on human chromosome 5q23-q33 by two-color fluorescence *in situ* hybridization. Genomics 16: 726-732.
2. Marklund, L., et al. 2006. Adult-onset autosomal dominant leukodystrophy with autonomic symptoms restricted to 1.5 Mbp on chromosome 5q23. Am. J. Med. Genet. B Neuropsychiatr. Genet. 141B: 608-614.
3. Cusick, J.K., et al. 2006. Identification of RELT homologues that associate with RELT and are phosphorylated by OSR1. Biochem. Biophys. Res. Commun. 340: 535-543.
4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611213. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Mullighan, C.G., et al. 2008. Genomic analysis of the clonal origins of relapsed acute lymphoblastic leukemia. Science 322: 1377-1380.
6. Cusick, J.K., et al. 2010. RELT induces cellular death in HEK 293 epithelial cells. Cell. Immunol. 261: 1-8.
7. SWISS-PROT/TrEMBL (Q8NC24). World Wide Web URL: http://www.uniprot.org/uniprot/Q8NC24

CHROMOSOMAL LOCATION

Genetic locus: RELL2 (human) mapping to 5q31.3.

PRODUCT

RELL2 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 RELL2 shRNA Plasmid (h): sc-92037-SH and RELL2 shRNA (h) Lentiviral Particles: sc-92037-V as alternate gene silencing products.

For independent verification of RELL2 (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-92037A, sc-92037B and sc-92037C.

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

RELL2 siRNA (h) is recommended for the inhibition of RELL2 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 RELL2 gene expression knockdown using RT-PCR Primer: RELL2 (h)-PR: sc-92037-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.