SANTA CRUZ BIOTECHNOLOGY, INC.

KSP37 siRNA (h): sc-75399

BACKGROUND

KSP37 (37 kDa killer-specific secretory protein), also known as FGFBP2 (fibro-blast growth factor binding protein 2), is a 223 amino acid protein that is secreted into the extracellular space and belongs to the fibroblast growth factor-binding protein family. Expressed in serum, as well as in cytotoxic T lymphocytes and peripheral leukocytes, KSP37 is thought to be involved in lymphocyte-mediated immunity, possibly playing a role in the development of asthma. The gene encoding KSP37 maps to human chromosome 4p15.32, which encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes. Defects in some of the genes located on chromosome 4 are associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

REFERENCES

1. Ogawa, K., et al. 2001. A novel serum protein that is selectively produced by cytotoxic lymphocytes. J. Immunol. 166: 6404-6412.
2. Hayano, C., et al. 2002. Accumulation of $CD16^{+}$ cells with secretion of KSP37 in decidua at the end of pregnancy. Am. J. Reprod. Immunol. 48: 57-62.
3. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607713. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Kuepper, M., et al. 2004. Increase in KSP37-positive peripheral blood lymphocytes in mild extrinsic asthma. Clin. Exp. Immunol. 137: 359-365.
5. Kuepper, M., et al. 2005. Increase in killer-specific secretory protein of 37 kDa in bronchoalveolar lavage fluid of allergen-challenged patients with atopic asthma. Clin. Exp. Allergy 35: 643-649.
6. Yamanaka, R., et al. 2006. Identification of expressed genes characterizing long-term survival in malignant glioma patients. Oncogene 25: 5994-6002.

CHROMOSOMAL LOCATION

Genetic locus: FGFBP2 (human) mapping to 4p15.32.

PRODUCT

KSP37 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 KSP37 shRNA Plasmid (h): sc-75399-SH and KSP37 shRNA (h) Lentiviral Particles: sc-75399-V as alternate gene silencing products.

For independent verification of KSP37 (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-75399A, sc-75399B and sc-75399C.

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

KSP37 siRNA (h) is recommended for the inhibition of KSP37 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

KSP37 (D-5): sc-374010 is recommended as a control antibody for monitoring of KSP37 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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 KSP37 gene expression knockdown using RT-PCR Primer: KSP37 (h)-PR: sc-75399-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.