SANTA CRUZ BIOTECHNOLOGY, INC.

SKIV2L siRNA (h): sc-95203

BACKGROUND

SKIV2L (superkiller viralicidic activity 2-like), also known as HLP (helicase-like protein), DDX13, SKI2W or SKIV2, is a 1,246 amino acid nuclear protein that functions as a helicase and possesses ATPase activity. A member of the helicase family and SKI2 subfamily, SKIV2L contains one helicase ATP-binding domain and a helicase C-terminal domain. SKIV2L is the human homologue of yeast SKI2 and is thought to play a role in antiviral activity by inhibiting translation of poly(A) deficient mRNA. The gene encoding SKIV2L maps to human chromosome 6p21.33, a region that falls within the class III region of the major histocompatibility complex. Chromosome 6 contains 170 million base pairs and comprises nearly 6% of the human genome. Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

1. Brunner, H.G., et al. 1994. A Stickler syndrome gene is linked to chromosome 6 near the COL11A2 gene. Hum. Mol. Genet. 3: 1561-1564.
2. Lee, S.G., et al. 1995. Identification and characterization of a human cDNA homologous to yeast SKI2. Genomics 25: 660-666.
3. Dangel, A.W., et al. 1995. Human helicase gene SKI2W in the HLA class III region exhibits striking structural similarities to the yeast antiviral gene SKI2 and to the human gene KIAA0052: emergence of a new gene family. Nucleic Acids Res. 23: 2120-2126.
4. Albertella, M.R., et al. 1996. Localization of eight additional genes in the human major histocompatibility complex, including the gene encoding the casein kinase II β subunit (CSNK2B). Genomics 36: 240-251.
5. Chen, C.Y., et al. 2001. AU binding proteins recruit the exosome to degrade ARE-containing mRNAs. Cell 107: 451-464.
6. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 600478. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Kondo, N., et al. 2009. Role of RDBP and SKIV2L variants in the major histocompatibility complex class III region in polypoidal choroidal vasculopathy etiology. Ophthalmology 116: 1502-1509.

CHROMOSOMAL LOCATION

Genetic locus: SKIV2L (human) mapping to 6p21.33.

PRODUCT

SKIV2L 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 SKIV2L shRNA Plasmid (h): sc-95203-SH and SKIV2L shRNA (h) Lentiviral Particles: sc-95203-V as alternate gene silencing products.

For independent verification of SKIV2L (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-95203A, sc-95203B and sc-95203C.

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

SKIV2L siRNA (h) is recommended for the inhibition of SKIV2L 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

SKIV2L (1E5): sc-517119 is recommended as a control antibody for monitoring of SKIV2L 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 SKIV2L gene expression knockdown using RT-PCR Primer: SKIV2L (h)-PR: sc-95203-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.