SANTA CRUZ BIOTECHNOLOGY, INC.

# ILPIP siRNA (h): sc-60842

## BACKGROUND

ILPIP (ILP-interacting protein), also designated amyotrophic lateral sclerosis 2 juvenile chromosome region gene 2 (ALS2CR2), interacts with X-linked IAP (XIAP), a member of the inhibitor of apoptosis protein (IAP) family. The IAP family are caspase inhibitors that block the execution phase of apoptosis. IAPs are involved in the development and progression of solid tumors and hematologic malignancies, making them a potential target for cancer therapeutics. ILPIP enhances XIAP-mediated activation of the TGFβ-activated kinase 1/c-Jun $NH_2$-terminal kinase 1 (TAK1/JNK1) signal transduction pathway. This pathway protects against the interleukin-1b converting enzyme of FAS-mediated apoptosis. The protection of XIAP against apoptosis by ILPIP is caspase-independent. When expressed alone, ILPIP only moderately activates the TAK1/JNK1 signal transduction pathway.

## REFERENCES


1. Hadano, S., et al. 2001. Cloning and characterization of three novel genes, ALS2CR1, ALS2CR2, and ALS2CR3, in the juvenile amyotrophic lateral sclerosis (ALS2) critical region at chromosome 2q33-q34: candidate genes for ALS2. Genomics 71: 200-213.
2. Strausberg, R.L., et. al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc. Natl. Acad. Sci. USA 99: 16899-16903.
3. Sanna, M.G., et al. 2002. ILPIP, a novel anti-apoptotic protein th of JNK1 and protection against apoptosis. J. Biol. Chem. 277: 30454-30462.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607333. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Hillier, L.W., et. al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
6. Schimmer, A.D. and Dalili, S. 2005. Targeting the IAP family of caspase inhibitors as an emerging therapeutic strategy. Hematology Am. Soc. Hematol. Educ. Program 1: 215-219.


## CHROMOSOMAL LOCATION

Genetic locus: STRADB (human) mapping to 2q33.1.

## PRODUCT

ILPIP 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 ILPIP shRNA Plasmid (h): sc-60842-SH and ILPIP shRNA (h) Lentiviral Particles: sc-60842-V as alternate gene silencing products.

For independent verification of ILPIP (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-60842A, sc-60842B and sc-60842C.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## 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

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

ILPIP (F-10): sc-390494 is recommended as a control antibody for monitoring of ILPIP 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 ILPIP gene expression knockdown using RT-PCR Primer: ILPIP (h)-PR: sc-60842-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.