

# Limkain b1 siRNA (h): sc-93405

## BACKGROUND

Limkain b1 (LKAP), also known as KIAA0430 or 4921513D23Rik, is a 1,741 amino acid protein that localizes to the peroxisome. Limkain b1 has been found to interact with LIMK-2, a protein that may be important for cell fate determination and growth control. Limkain b1 contains one RRM (RNA recognition motif) domain, indicating that Limkain b1 may bind single-stranded RNA. Limkain b1 is expressed as six isoforms produced by alternative splicing events. The gene that encodes Limkain b1 maps to human chromosome 16, which encodes over 900 genes in approximately 90 million base pairs, making up nearly 3% of human cellular DNA. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. Signs of Rubinstein-Taybi include mental retardation and predisposition to tumor growth and white blood cell neoplasias. Crohn's disease is a gastrointestinal inflammatory condition associated with chromosome 16 through the NOD2 gene.

## REFERENCES

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2. Ishikawa, K., et al. 1997. Prediction of the coding sequences of unidentified human genes. VIII. 78 new cDNA clones from brain which code for large proteins *in vitro*. *DNA Res.* 4: 307-313.
3. Loftus, B.J., et al. 1999. Genome duplications and other features in 12 Mb of DNA sequence from human chromosome 16p and 16q. *Genomics* 60: 295-308.
4. Brandenberger, R., et al. 2004. Transcriptome characterization elucidates signaling networks that control human ES cell growth and differentiation. *Nat. Biotechnol.* 22: 707-716.
5. Dunster, K., et al. 2005. Limkain b1, a novel human autoantigen localized to a subset of ABCD3 and PXF marked peroxisomes. *Clin. Exp. Immunol.* 140: 556-563.
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## CHROMOSOMAL LOCATION

Genetic locus: KIAA0430 (human) mapping to 16p13.11.

## PRODUCT

Limkain b1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Limkain b1 shRNA Plasmid (h): sc-93405-SH and Limkain b1 shRNA (h) Lentiviral Particles: sc-93405-V as alternate gene silencing products.

For independent verification of Limkain b1 (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-93405A, sc-93405B and sc-93405C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Limkain b1 siRNA (h) is recommended for the inhibition of Limkain b1 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  $\mu$ M in 66  $\mu$ l. 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 Limkain b1 gene expression knockdown using RT-PCR Primer: Limkain b1 (h)-PR: sc-93405-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.