SANTA CRUZ BIOTECHNOLOGY, INC.

# ABLIM1 siRNA (m): sc-140780

## BACKGROUND

The *C. elegans* protein UNC-115 mediates axon guidance by modulating the growth cone Actin cytoskeleton in response to signals received by growth cone receptors. The mammalian homolog of UNC-115 is the Actin-binding LIM protein family member 1 (ABLIM1, also designated Limatin). The ABLIM1 protein has an N-terminal domain that contains four double zinc finger motifs, which conform to the LIM motif consensus sequence. ABLIM1 binds to F-Actin through a dematin-like domain and is expressed in retina, brain and muscle tissue. There are four known isoforms of ABLIM1. The gene encoding ABLIM1 maps to a region of chromosome 10 associated with frequent loss of heterozygosity in human tumors, thus identifying ABLIM1 as a candidate tumor suppressor gene. ABLIM2 and ABLIM3 show highest expression in muscle and neuronal tissues, bind to F-Actin, and are localized on stress fibers. They also have been shown to enhance STARS (striated muscle activator of Rho signaling) dependent activation of serum-response factor (SRF), thereby modulating transcription.

## REFERENCES


1. Kim, A.C., Peters, L.L., Knoll, J.H., Van Huffel, C., Ciciotte, S.L., Kleyn, P.W. and Chishti, A.H. 1997. Limatin (LIMAB1), an Actin-binding LIM protein, maps to mouse chromosome 19 and human chromosome 10q25, a region frequently deleted in human cancers. Genomics 46: 291-293.
2. Roof, D.J., Hayes, A., Adamian, M., Chishti, A.H. and Li, T. 1997. Molecular characterization of ABLIM, a novel Actin-binding and double zinc finger protein. J. Cell Biol. 138: 575-588.
3. Lundquist, E.A., Herman, R.K., Shaw, J.E. and Bargmann, C.I. 1998. UNC-115, a conserved protein with predicted LIM and Actin-binding domains, mediates axon guidance in *C. elegans*. Neuron 21: 385-392.
4. Lu, C., Huang, X., Ma, H.F., Gooley, J.J., Aparacio, J., Roof, D.J., Chen, C., Chen, D.F. and Li, T. 2003. Normal retinal development and retinofugal projections in mice lacking the retina-specific variant of Actin-binding LIM domain protein. Neuroscience 120: 121-131.


## CHROMOSOMAL LOCATION

Genetic locus: Ablim1 (mouse) mapping to 19 D2.

## PRODUCT

ABLIM1 siRNA (m) is a target-specific 19-25 nt siRNA 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 ABLIM1 shRNA Plasmid (m): sc-140780-SH and ABLIM1 shRNA (m) Lentiviral Particles: sc-140780-V as alternate gene silencing products.

## 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.

## 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

ABLIM1 siRNA (m) is recommended for the inhibition of ABLIM1 expression in mouse 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 ABLIM1 gene expression knockdown using RT-PCR Primer: ABLIM1 (m)-PR: sc-140780-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.