ABLIM3 (Y-14): sc-104795



The Power to Question

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

- 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.
- 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.
- 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.
- 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.
- Yang, Y. and Lundquist, E.A. 2005. The actin-binding protein UNC-115/ ABLIM controls formation of lamellipodia and filopodia and neuronal morphogenesis in *Caenorhabditis elegans*. Mol. Cell. Biol. 25: 5158-5170.
- Barrientos, T., Frank, D., Kuwahara, K., Bezprozvannaya, S., Pipes, G.C., Bassel-Duby, R., Richardson, J.A., Katus, H.A., Olson, E.N. and Frey, N. 2007. Two novel members of the ABLIM protein family, ABLIM2 and 3, associate with STARS and directly bind F-actin. J. Biol. Chem. 282: 8393-8403.

CHROMOSOMAL LOCATION

Genetic locus: ABLIM3 (human) mapping to 5q32; Ablim3 (mouse) mapping to 18 E1.

SOURCE

ABLIM3 (Y-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ABLIM3 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104795 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ABLIM3 (Y-14) is recommended for detection of ABLIM3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ABLIM3 (Y-14) is also recommended for detection of ABLIM3 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for ABLIM3 siRNA (h): sc-91615, ABLIM3 siRNA (m): sc-140781, ABLIM3 shRNA Plasmid (h): sc-91615-SH, ABLIM3 shRNA (h) Lentiviral Particles: sc-91615-V and ABLIM3 shRNA (m) Lentiviral Particles: sc-140781-V.

Molecular Weight of ABLIM3: 78 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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



Try **ABLIM3 (C-2):** sc-398575, our highly recommended monoclonal alternative to ABLIM3 (Y-14).

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**