



ABLIM2 (P-17): sc-104021

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: ABLIM2 (human) mapping to 4p16.1; Ablim2 (mouse) mapping to 5 B3.

SOURCE

ABLIM2 (P-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ABLIM2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-104021 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ABLIM2 (P-17) is recommended for detection of ABLIM2 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); non cross-reactive with family members ABLIM1 or ABLIM3.

Suitable for use as control antibody for ABLIM2 siRNA (h): sc-89008, ABLIM2 siRNA (m): sc-105027, ABLIM2 shRNA Plasmid (h): sc-89008-SH, ABLIM2 shRNA Plasmid (m): sc-105027-SH, ABLIM2 shRNA (h) Lentiviral Particles: sc-89008-V and ABLIM2 shRNA (m) Lentiviral Particles: sc-105027-V.

Molecular Weight of ABLIM2: 68 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.