

Leiomodin 1 (P-12): sc-160067

BACKGROUND

Members of the Leiomodin protein family are closely related to the tropomodulin family of actin filament pointed end-capping proteins. Leiomodins are characterized as actin-binding proteins that acts as strong filament nucleators in muscle cells. Leiomodin 1, also known as 64 kDa autoantigen D1 or SM-Lmod, is a 600 amino acid protein that is highly expressed in a variety of tissues that contain smooth muscle and is expressed at lower levels in thyroid and extraocular muscles. Analyzing sera from patients with Hashimoto thyroiditis with thyroid-associated ophthalmopathy (TAO) revealed that antibodies against Leiomodin 1 had been produced in 8 out of 34 patients, while all 12 normal and nonautoimmune individuals were negative. There are two isoforms of Leiomodin 1, which are produced as a result of alternative splicing events.

REFERENCES

- Dong, Q., et al. 1991. Cloning and sequencing of a novel 64 kDa autoantigen recognized by patients with autoimmune thyroid disease. *J. Clin. Endocrinol. Metab.* 72: 1375-1381.
- Zhang, Z.G., et al. 1992. Antibodies in the serum of patients with autoimmune thyroid disorders react with a recombinant 98 amino acid fragment of a full length 64 kDa eye muscle membrane protein which is also expressed in the thyroid. *Autoimmunity* 13: 151-157.
- Wall, J.R., et al. 1993. Antibodies reactive with an intracellular epitope of a recombinant 64 kDa thyroid and eye muscle protein in patients with thyroid autoimmunity and ophthalmopathy. *J. Endocrinol. Invest.* 16: 863-868.
- Bernard, N.F., et al. 1994. Antibodies against 1D, a recombinant 64-kDa membrane protein, are associated with ophthalmopathy in patients with thyroid autoimmunity. *Clin. Immunol. Immunopathol.* 73: 225-233.
- Conley, C.A. and Fowler, V.M. 1999. Localization of the human 64 kD auto-antigen D1 to myofibrils in a subset of extraocular muscle fibers. *Curr. Eye Res.* 19: 313-322.

CHROMOSOMAL LOCATION

Genetic locus: LMOD1 (human) mapping to 1q32.1; Lmod1 (mouse) mapping to 1 E4.

SOURCE

Leiomodin 1 (P-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Leiomodin 1 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-160067 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Leiomodin 1 (P-12) is recommended for detection of Leiomodin 1 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 Leiomodin 2 or Leiomodin 3.

Suitable for use as control antibody for Leiomodin 1 siRNA (h): sc-78983, Leiomodin 1 siRNA (m): sc-146697, Leiomodin 1 shRNA Plasmid (h): sc-78983-SH, Leiomodin 1 shRNA Plasmid (m): sc-146697-SH, Leiomodin 1 shRNA (h) Lentiviral Particles: sc-78983-V and Leiomodin 1 shRNA (m) Lentiviral Particles: sc-146697-V.

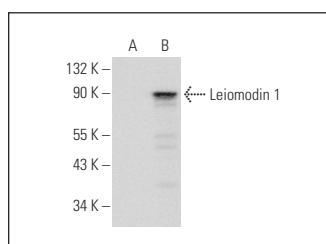
Molecular Weight of Leiomodin 1: 64 kDa.

Positive Controls: Leiomodin 1 (m2): 293T Lysate: sc-178878.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Leiomodin 1 (P-12): sc-160067. Western blot analysis of Leiomodin 1 expression in non-transfected: sc-117752 (A) and mouse Leiomodin 1 transfected: sc-178878 (B) 293T whole cell lysates.

STORAGE

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

PROTOCOLS

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