

melusin (A-25): sc-133780

BACKGROUND

Melusin is a cysteine-rich cytoplasmic protein that is predominantly expressed in striated skeletal and cardiac muscles. Within muscle tissues, Melusin directly associates with the cytoplasmic domains of various subunits of the integrin membrane receptor. Melusin is localized in rows flanking the Z line containing actinin, which suggests that Melusin, together with the integrin receptors, contributes to the Actin-integrin junctional complex and the integrity of the cytoskeleton. Melusin expression is detected in 15 day embryos and it is also highly expressed during secondary myogenesis, a process in which a distinct myoblast population line up using primary myotubes as scaffold and fuse to each other forming secondary myotubes that will give rise to the muscle fibers of adult tissue. In adult tissues, high expression of Melusin is observed in regenerating adult tibialis anterior muscle, further indicating that Melusin contributes to the maturation and organization of muscle cells.

REFERENCES

- Pardo, J.V., Siliciano, J.D. and Craig, S.W. 1983. A vinculin-containing cortical lattice in skeletal muscle: transverse lattice elements ("costameres") mark sites of attachment between myofibrils and sarcolemma. *Proc. Natl. Acad. Sci. USA* 80: 1008-1012.
- Bozyczko, D., Decker, C., Muschler, J. and Horwitz, A.F. 1989. Integrin on developing and adult skeletal muscle. *Exp. Cell Res.* 183: 72-91.
- Belkin, A.M., Zhidkova, N.I., Balzac, F., Altruda, F., Tomatis, D., Maier, A., Tarone, G., Koteliensky, V.E. and BurrIDGE, K. 1996. β 1D integrin displaces the β 1A isoform in striated muscles: localization at junctional structures and signaling potential in nonmuscle cells. *J. Cell Biol.* 132: 211-226.
- Brancaccio, M., Cabodi, S., Belkin, A.M., Collo, G., Koteliensky, V.E., Tomatis, D., Altruda, F., Silengo, L. and Tarone, G. 1998. Differential onset of expression of α 7 and β 1D integrins during mouse heart and skeletal muscle development. *Cell Adhes. Commun.* 5: 193-205.
- Brancaccio, M., Guazzone, S., Menini, N., Sibona, E., Hirsch, E., De Andrea, M., Rocchi, M., Altruda, F., Tarone, G. and Silengo L. 1999. Melusin is a new muscle-specific interactor for 1 integrin cytoplasmic domain. *J. Biol. Chem.* 274: 29282-29288.

CHROMOSOMAL LOCATION

Genetic locus: ITGB1BP2 (human) mapping to Xq13.1; Itgb1bp2 (mouse) mapping to X D.

SOURCE

melusin (A-25) is a Protein A purified rabbit polyclonal antibody raised against synthetic melusin peptide of human origin.

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.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

melusin (A-25) is recommended for detection of melusin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for melusin siRNA (h): sc-40736, melusin siRNA (m): sc-40737, melusin shRNA Plasmid (h): sc-40736-SH, melusin shRNA Plasmid (m): sc-40737-SH, melusin shRNA (h) Lentiviral Particles: sc-40736-V and melusin shRNA (m) Lentiviral Particles: sc-40737-V.

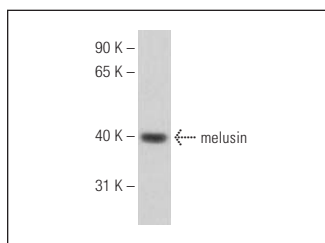
Molecular Weight of melusin: 38 kDa.

Positive Controls: human fetal heart tissue extract or human muscle tissue.

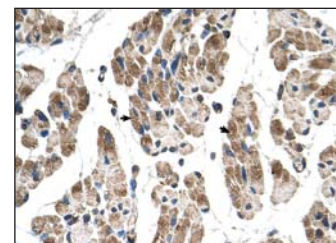
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



melusin (A-25): sc-133780. Western blot analysis of melusin expression in human fetal heart tissue extract



melusin (A-25): sc-133780. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human muscle tissue showing nuclear and cytoplasmic localization.

RESEARCH USE

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