SANTA CRUZ BIOTECHNOLOGY, INC.

M-cadherin (H-71): sc-10734

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Cadherins are a multigene family of Ca^{2+}-dependent cell adhesion molecules. They are transmembrane glycoproteins consisting of an extracellular domain, which mediates Ca^{2+}-dependent intercellular adhesion by homophilic interactions, a transmembrane region and a cytoplasmic domain. The extracellular domain is divided into a series of subdomains designated EC1-EC5. Homologies between different members of the cadherin family are most prominent in the cytoplasmic domain and in EC1 and EC2 and much less so in EC5 of the extracellular domain and in the transmembrane region. The binding properties and specificities of the adhesive function are located in the N-terminal part of the molecules. Four members of the cadherin family have been identified and molecularly cloned from mammalian cells. These include the neuronal (N), epithelial (E), placental (P) and muscle (M) cadherins. M-cadherin is not found in fibroblasts but is expressed at low level in myoblasts and is upregulated following induction of myotube formation, suggesting a specific function in skeletal muscle cell differentiation.

CHROMOSOMAL LOCATION

Genetic locus: CDH15 (human) mapping to 16q24.3; Cdh15 (mouse) mapping to 8 E1.

SOURCE

M-cadherin (H-71) is a rabbit polyclonal antibody raised against amino acids 545-615 mapping near the C-terminus of M-cadherin 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.

APPLICATIONS

M-cadherin (H-71) is recommended for detection of M-cadherin 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), 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 M-cadherin siRNA (h): sc-37041, M-cadherin siRNA (m): sc-37042, M-cadherin shRNA Plasmid (h): sc-37041-SH, M-cadherin shRNA Plasmid (m): sc-37042-SH, M-cadherin shRNA (h) Lentiviral Particles: sc-37041-V and M-cadherin shRNA (m) Lentiviral Particles: sc-37042-V.

Molecular Weight of M-cadherin: 120 kDa.

Positive Controls: SJRH30 cell lysate: sc-2287 or A-673 cell lysate: sc-2414.

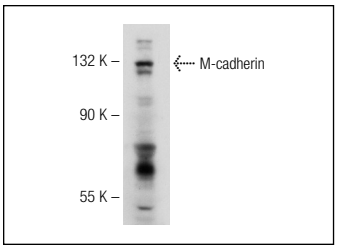
RESEARCH USE

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

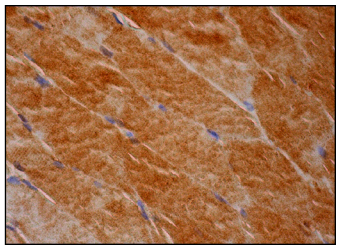
STORAGE

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

DATA



M-cadherin (H-71): sc-10734. Western blot analysis of M-cadherin expression in SJRH30 whole cell lysate.



M-cadherin (H-71): sc-10734. Immunoperox-idase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Nishikawa, J., et al. 2005. Increase of cardiotrophin-1 immunoreactivity in regenerating and overloaded but not denervated muscles of rats. Neuropathology 25: 54-65.
2. Aoi, S., et al. 2005. Impaired expression of myogenic regulatory molecules in the pelvic floor muscles of murine embryos with anorectal malformations. J. Pediatr. Surg. 40: 805-809.
3. Wallace, G.Q., et al. 2008. Long-term survival of transplanted stem cells in immunocompetent mice with muscular dystrophy. Am. J. Pathol. 173: 792-802.
4. Trovato-Salinaro, A., et al. 2009. Regulation of connexin gene expression during skeletal muscle regeneration in the adult rat. Am. J. Physiol., Cell Physiol. 296: C593-C606.
5. Grabowska, I., et al. 2010. Comparison of satellite cell derived myoblasts and C2C12 differentiation in two- and three-dimensional cultures: changes in adhesion protein expression. Cell Biol. Int. 35: 125-133.
6. Zhang, B.T., et al. 2010. The effects of low frequency electrical stimulation on satellite cell activity in rat skeletal muscle during hindlimb suspension. BMC Cell Biol. 11: 87.
7. Schabort, E.J., et al. 2011. TGF-β isoforms inhibit IGF-1-induced migration and regulate terminal differentiation in a cell-specific manner. J. Muscle Res. Cell Motil. 31: 359-367.