SANTA CRUZ BIOTECHNOLOGY, INC.

M-cadherin (N-19): sc-6470

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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 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-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.

Blocking peptide available for competition studies, sc-6470 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

M-cadherin (N-19) 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), 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).

M-cadherin (N-19) is also recommended for detection of M-cadherin in additional species, including canine and bovine.

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

SELECT PRODUCT CITATIONS

1. Sabourin, L.A., et al. 1999. Reduced differentiation potential of primary $MyoD^{-/-}$ myogenic cells derived from adult skeletal muscle. J. Biol. Chem. 144: 631-643.
2. Putman, C.T., et al. 2001. Fiber-type transitions and satellite cell activation in low-frequency-stimulated muscles of young and aging rats. J. Gerontol. A Biol. Sci. Med. Sci. 56: B510-B519.
3. Tetsuro, T., et al. 2002. New fiber formation in the interstitial spaces of rat skeletal muscle during postnatal growth. J. Histochem. Cytochem. 50: 1097-1111.
4. Germani, A., et al. 2003. Vascular endothelial growth factor modulates skeletal myoblast function. Am. J. Pathol. 163: 1417-1428.
5. Sherwood, R.I., et al. 2004. Isolation of adult mouse myogenic progenitors: functional heterogeneity of cells within and engrafting skeletal muscle. Cell 119: 543-554.
6. Sinanan, A.C., et al. 2004. Human adult craniofacial muscle-derived cells: neural-cell adhesion-molecule (NCAM; CD56)-expressing cells appear to contain multipotential stem cells. Biotechnol. Appl. Biochem. 40: 25-34.
7. Chen, X., et al. 2005. Dedifferentiation of adult human myoblasts induced by ciliary neurotrophic factor *in vitro*. Mol. Cell. Biol. 16: 3140-3151.
8. Martins, K.J., et al. 2006. Effect of satellite cell ablation on low-frequency-stimulated fast-to-slow fibre-type transitions in rat skeletal muscle. J. Physiol. 572: 281-294.
9. Zheng, B., et al. 2007. Prospective identification of myogenic endothelial cells in human skeletal muscle. Nat. Biotechnol. 25: 1025-1034.
10. Sun, R., et al. 2009. Leukotriene B4 regulates proliferation and differentiation of cultured rat myoblasts via the BLT1 pathway. Mol. Cells 27: 403-408.
11. Yang, J., et al. 2012. Dopaminergic neuronal conversion from adult rat skeletal muscle-derived stem cells *in vitro*. Neurochem. Res. 37: 1982-1992.

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.