

M-cadherin (5): sc-136292

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.

REFERENCES

1. Ringwald, M., et al. 1987. The structure of cell adhesion molecule uvomorulin: insights into the molecular mechanism of Ca^{2+} -dependent cell adhesion. *EMBO J.* 6: 3647-3653.
2. Nose, A., et al. 1987. Isolation of placental cadherin cDNA: identification of a novel gene family of cell-cell adhesion molecules. *EMBO J.* 6: 3655-3661.
3. Takeichi, M. 1988. The cadherins: cell-cell adhesion molecules controlling animal morphogenesis. *Development* 102: 639-655.
4. Hatta, K., et al. 1988. Cloning and expression of cDNA encoding a neural calcium-dependent cell adhesion molecule: its identity in the cadherin gene family. *J. Cell Biol.* 106: 873-881.
5. Miyatani, S., et al. 1989. Neural cadherin: role in selective cell-cell adhesion. *Science* 245: 631-635.
6. Nose, A., et al. 1990. Localization of specificity determining sites in cadherin cell adhesion molecules. *Cell* 61: 147-155.
7. Ozawa, M., et al. 1990. Single amino acid substitutions in one Ca^{2+} binding site of uvomorulin abolish the adhesive function. *Cell* 63: 1033-1038.
8. Donalies, M., et al. 1991. Expression of M-cadherin, a member of the cadherin multigene family, correlates with differentiation of skeletal muscle cells. *Proc. Natl. Acad. Sci. USA* 88: 8024-8028.

CHROMOSOMAL LOCATION

Genetic locus: *Cdh15* (mouse) mapping to 8 E1.

SOURCE

M-cadherin (5) is a mouse monoclonal antibody raised against amino acids 253-366 of M-cadherin of mouse origin.

PRODUCT

Each vial contains 50 μg IgG_{2a} in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

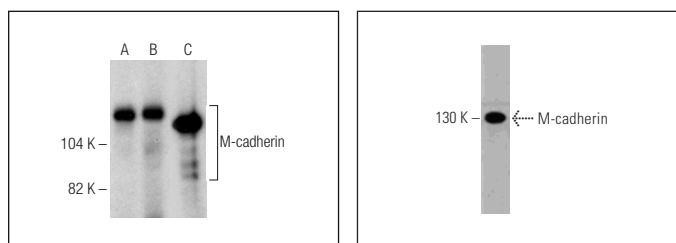
M-cadherin (5) is recommended for detection of M-cadherin of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for M-cadherin siRNA (m): sc-37042, M-cadherin shRNA Plasmid (m): sc-37042-SH and M-cadherin shRNA (m) Lentiviral Particles: sc-37042-V.

Molecular Weight of M-cadherin: 120 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188, mouse cerebellum extract: sc-2403 or rat skeletal muscle extract: sc-364810.

DATA



M-cadherin (5): sc-136292. Western blot analysis of M-cadherin expression in C2C12 whole cell lysate (A) and rat skeletal muscle (B) and mouse cerebellum (C) tissue extracts.

M-cadherin (5): sc-136292. Western blot analysis of M-cadherin expression in mouse neonate tissue extract.

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. Not for resale.

PROTOCOLS

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



See **M-cadherin (C-8): sc-398107** for M-cadherin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.