SANTA CRUZ BIOTECHNOLOGY, INC.

M-cadherin (C-8): sc-398107

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.

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.

CHROMOSOMAL LOCATION

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

SOURCE

M-cadherin (C-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 710-727 within a C-terminal cytoplasmic domain of M-cadherin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

M-cadherin (C-8) is available conjugated to agarose (sc-398107 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398107 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398107 PE), fluorescein (sc-398107 FITC), Alexa Fluor® 488 (sc-398107 AF488), Alexa Fluor® 546 (sc-398107 AF546), Alexa Fluor® 594 (sc-398107 AF594) or Alexa Fluor® 647 (sc-398107 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398107 AF680) or Alexa Fluor® 790 (sc-398107 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398107 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

M-cadherin (C-8) is recommended for detection of M-cadherin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

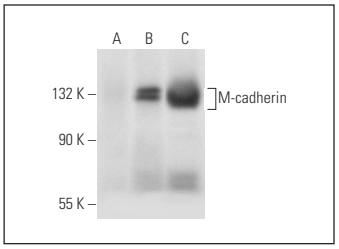
Molecular Weight of M-cadherin: 120 kDa.

Positive Controls: SJRH30 cell lysate: sc-2287, A-673 cell lysate: sc-2414 or M-cadherin (h): 293T Lysate: sc-159355.

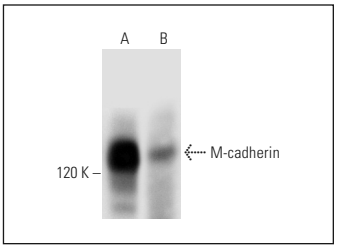
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



M-cadherin (C-8): sc-398107. Western blot analysis of M-cadherin expression in non-transfected 293T: sc-117752 (**A**), human M-cadherin transfected 293T: sc-159355 (**B**) and SJRH30 (**C**) whole cell lysates.



M-cadherin (C-8): sc-398107. Western blot analysis of M-cadherin expression in A-673 whole cell lysate (**A**) and mouse cerebellum tissue extract (**B**).

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.

PROTOCOLS

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