

μ-protocadherin (G-1): sc-271138

BACKGROUND

The mucin-like protocadherin, μ-protocadherin, is a developmentally regulated, single pass type I transmembrane protein that belongs to the cadherin superfamily. It contains four cadherin-like ectodomains, a triply repeating mucin domain, four SH3 binding regions, N- and O-glycosylation sites and a possible C-terminal PDZ binding domain. μ-protocadherin is expressed in various epithelial tissues and localizes to the apical surface along the brush border of the proximal convoluted tubule. It acts as a calcium dependent cell adhesion molecule mediating cell aggregation and may play a role in the activation of signaling events. Due to alternative splicing at least four isoforms exist for μ-protocadherin. These isoforms vary in the region containing the mucin-like domains. Only the longest isoform contains the triply repeating mucin domain.

REFERENCES

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- Goldberg, M., et al. 2002. Identification and expression analysis of the human μ-protocadherin gene in fetal and adult kidneys. *Am. J. Physiol. Renal Physiol.* 283: 454-463.
- Goldberg, M., et al. 2003. Biallelic expression of HRAS and MUCDHL in human and mouse. *Hum. Genet.* 112: 334-342.
- Wang, Y., et al. 2004. Gene expression profiles and molecular markers to predict recurrence of Dukes' B colon cancer. *J. Clin. Oncol.* 22: 1564-1571.
- Moulton, D.E., et al. 2004. Expression of a novel cadherin in the mouse and human intestine. *Pediatr. Res.* 55: 927-934.
- Redies, C., et al. 2005. δ-protocadherins: unique structures and functions. *Cell. Mol. Life Sci.* 62: 2840-2852.
- Kostadinov, R., et al. 2005. GRSDb: a database of quadruplex forming G-rich sequences in alternatively processed mammalian pre-mRNA sequences. *Nucleic Acids Res.* 34: 119-124.

CHROMOSOMAL LOCATION

Genetic locus: CDHR5 (human) mapping to 11p15.5.

SOURCE

μ-protocadherin (G-1) is a mouse monoclonal antibody raised against amino acids 126-350 mapping within an extracellular domain of μ-protocadherin of human origin.

PRODUCT

Each vial contains 200 μg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

μ-protocadherin (G-1) is recommended for detection of μ-protocadherin of 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 μ-protocadherin siRNA (h): sc-72286, μ-protocadherin shRNA Plasmid (h): sc-72286-SH and μ-protocadherin shRNA (h) Lentiviral Particles: sc-72286-V.

Molecular Weight of μ-protocadherin isoforms: 110-220 kDa.

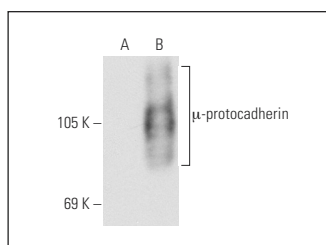
Positive Controls: μ-protocadherin (h): 293T Lysate: sc-112145 or human small intestine extract: sc-364225.

RECOMMENDED SUPPORT REAGENTS

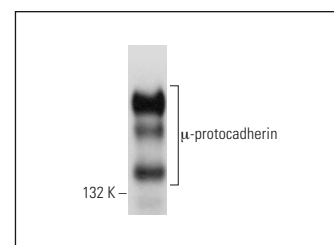
To ensure optimal results, the following support reagents are recommended:

- 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 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



μ-protocadherin (G-1): sc-271138. Western blot analysis of μ-protocadherin expression in non-transfected: sc-117752 (A) and human μ-protocadherin transfected: sc-112145 (B) 293T whole cell lysates.



μ-protocadherin (G-1): sc-271138. Western blot analysis of μ-protocadherin expression in human small intestine 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.

PROTOCOLS

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