

# $\mu$ -protocadherin (A-11): sc-166953

## BACKGROUND

The mucin-like protocadherin,  $\mu$ -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.  $\mu$ -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  $\mu$ -protocadherin. These isoforms vary in the region containing the mucin-like domains. Only the longest isoform contains the triply repeating mucin domain.

## CHROMOSOMAL LOCATION

Genetic locus: CDHR5 (human) mapping to 11p15.5; Mupcdh (mouse) mapping to 7 F5.

## SOURCE

$\mu$ -protocadherin (A-11) is a mouse monoclonal antibody raised against amino acids 126-350 mapping within an extracellular domain of  $\mu$ -protocadherin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

$\mu$ -protocadherin (A-11) is available conjugated to agarose (sc-166953 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166953 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166953 PE), fluorescein (sc-166953 FITC), Alexa Fluor® 488 (sc-166953 AF488), Alexa Fluor® 546 (sc-166953 AF546), Alexa Fluor® 594 (sc-166953 AF594) or Alexa Fluor® 647 (sc-166953 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166953 AF680) or Alexa Fluor® 790 (sc-166953 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

$\mu$ -protocadherin (A-11) is recommended for detection of  $\mu$ -protocadherin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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  $\mu$ -protocadherin siRNA (h): sc-72286,  $\mu$ -protocadherin siRNA (m): sc-152486,  $\mu$ -protocadherin shRNA Plasmid (h): sc-72286-SH,  $\mu$ -protocadherin shRNA Plasmid (m): sc-152486-SH,  $\mu$ -protocadherin shRNA (h) Lentiviral Particles: sc-72286-V and  $\mu$ -protocadherin shRNA (m) Lentiviral Particles: sc-152486-V.

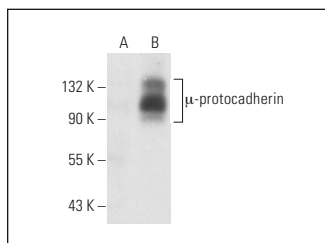
Molecular Weight of  $\mu$ -protocadherin isoforms: 110-220 kDa.

Positive Controls:  $\mu$ -protocadherin (h): 293T Lysate: sc-112145.

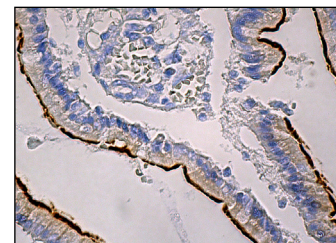
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



$\mu$ -protocadherin (A-11): sc-166953. Western blot analysis of  $\mu$ -protocadherin expression in non-transfected: sc-117752 (A) and human  $\mu$ -protocadherin transfected: sc-112145 (B) 293T whole cell lysates.



$\mu$ -protocadherin (A-11): sc-166953. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing striated border staining.

## SELECT PRODUCT CITATIONS

- Montorsi, L., et al. 2016. Expression of  $\mu$ -protocadherin is negatively regulated by the activation of the  $\beta$ -catenin signaling pathway in normal and cancer colorectal enterocytes. *Cell Death Dis.* 7: e2263.
- Parenti, S., et al. 2018. KLF4 mediates the effect of 5-ASA on the  $\beta$ -catenin pathway in colon cancer cells. *Cancer Prev. Res.* 11: 503-510.
- Gao, J., et al. 2020. Up-regulation of CDHR5 expression promotes malignant phenotype of pancreatic ductal adenocarcinoma. *J. Cell. Mol. Med.* 24: 12726-12735.

## 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](http://www.scbt.com) for detailed protocols and support products.

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