Qty: 100 µg/200 µL

Mouse anti-Podocalyxin

Catalog No. 39-3800

Lot No.

Mouse anti-Podocalyxin

FORM

This monoclonal antibody is supplied as a 200 µL aliquot at a concentration of 0.5 mg/mL in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

CLONE: 3D3 **ISOTYPE:** Mouse IgG_1

IMMUNOGEN

Human podocalyxin fusion protein, which shares 46% homology with mouse and rat

SPECIFICITY

This antibody is specific for the podocalyxin (gp200, GCTM-2) protein, and recognizes an epitope on the extracellular domain of the protein's backbone. On Western blots, it identifies the target band at ~160 kDa.

REACTIVITY

Reactivity has been confirmed with human HUVEC cell lysates and kidney homogenates by Western blotting, with Tera-1 cells by immunofluorescence,[1] and with frozen human kidney tissue by immunohistochemistry.[2] This antibody does not cross-react with mouse, rat, or rabbit podocalyxin.

Sample	Western Blotting	Immuno-fluorescence	Immuno-precipitation	Immuno-histochemistry (frozen)	Immuno-histochemistry (paraffin)
Human	+++	+++	++	+++	+
Mouse	0	ND	ND	ND	ND
Rat	0	ND	ND	ND	ND
Rabbit	0	ND	ND	ND	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1-3 µg/mL
Immunoprecipitation: 50 µg/mL
Immunofluorescence[1]: 3-5 µg/mL
Immunohistochemistry (frozen)[2]: 10 µg/mL

STORAGE

Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

Podocalyxin, an integral membrane, cell surface protein, is a member of a family of sialomucins that also includes CD34 and endoglycan. Podocalyxin is normally expressed on hematopoietic progenitors, vascular endothelia, and kidney podocytes.[2-3]

Podocalyxin was originally identified as a major structural extracellular matrix sialoglycoprotein of glomerular podocytes, highly differentiated epithelial cells that have interdigitating foot processes that form filtration slits over the glomerular basement membrane. The integrity of the slits is crucial for proper blood filtering. They are maintained in part by the negatively charged podocalyxin protein, which functions as an anti-adhesion molecule in the extracellular glycocalyx of the glomerulus,[4] subtly perturbing cell junction protein localization and decreasing tight junction-dependent transepithelial resistance.[5] In a study of human breast cancer tissue specimens, overexpression of podocalyxin has been correlated with poor patient outcome in a distinct set of invasive tumors.[6]

The calculated molecular weight of podocalyxin (528 amino acids) is 55 kDa, but the apparent molecular weight of kidney podocalyxin, as seen on protein gels, is ~165 kDa. The difference is presumed to be due to post-translational glycosylation.[1]

REFERENCES

1. Schopperle WM, et al. *Biochem Biophys Res Commun* 30(2):285-290, 2003.
2. Kershaw DB, et al. *J Biol Chem* 272(25):15708-15714, 1997.
3. Li J, et al. *DNA Seq* 12(5-6):407-412, 2001.
4. Economou CG, et al. *J Cell Sci* 117(5):3281-3294, 2004.
5. Takeda T. *Clin Exp Nephrol* 7(4) :260-269, 2003.
6. Somasiri A, et al. *Cancer Res* 64 :5068-5073, 2004.

RELATED PRODUCTS

Product	*Conjugate*	*Cat. No.*
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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