

podoplanin (18H5): sc-59347

BACKGROUND

Puromycin aminonucleoside nephrosis (PAN) is a rat model for human minimal change nephropathy. During PAN, severe proteinuria is induced that is paralleled by a reduced expression of a rat podocyte protein named podoplanin. Podoplanin, also known as glycoprotein 38 (GP38) is a type I membrane protein. Podoplanin localizes in stromal cells of peripheral lymphoid tissue and thymic epithelial cells. As a regulator of the lymphatic endothelium, podoplanin probably plays a role in maintaining the unique shape of podocytes.

REFERENCES

1. Farr, A.G., et al. 1992. Characterization and cloning of a novel glycoprotein expressed by stromal cells in T-dependent areas of peripheral lymphoid tissues. *J. Exp. Med.* 176: 1477-1482.
2. Farr, A., et al. 1992. Characterization of an antigenic determinant preferentially expressed by type I epithelial cells in the murine thymus. *J. Histochem. Cytochem.* 40: 651-664.
3. Schoppmann, S.F., et al. 2001. Lymphatic microvessel density and lymphovascular invasion assessed by anti-podoplanin immunostaining in human breast cancer. *Anticancer Res.* 21: 2351-2355.

CHROMOSOMAL LOCATION

Genetic locus: PDPN (human) mapping to 1p36.21.

SOURCE

podoplanin (18H5) is a mouse monoclonal antibody raised against full length podoplanin of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

podoplanin (18H5) is recommended for detection of podoplanin of human 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)], 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), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for podoplanin siRNA (h): sc-62834, podoplanin shRNA Plasmid (h): sc-62834-SH and podoplanin shRNA (h) Lentiviral Particles: sc-62834-V.

Molecular Weight of podoplanin: 43 kDa.

Positive Controls: A-673 cell lysate: sc-2414.

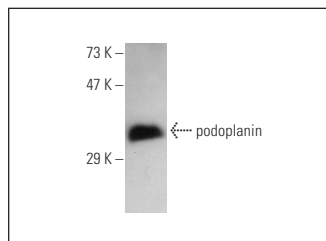
RESEARCH USE

For research use only, not for use in diagnostic procedures.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



podoplanin (18H5): sc-59347. Western blot analysis of podoplanin expression in A-673 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Scrideli, C.A., et al. 2008. Gene expression profile analysis of primary glioblastomas and non-neoplastic brain tissue: identification of potential target genes by oligonucleotide microarray and real-time quantitative PCR. *J. Neurooncol.* 88: 281-291.
2. Christou, C.M., et al. 2008. Renal cells activate the platelet receptor CLEC-2 through podoplanin. *Biochem. J.* 411: 133-140.
3. Tang, C., et al. 2016. Multivariate analysis of metastasis-related risk factors for patients with gastroenteropancreatic neuroendocrine tumors based on clinicopathological and endoscopic features. *Oncol. Rep.* 36: 3343-3352.
4. Jensen, T.J., et al. 2017. The effect of meconium exposure on the expression and differentiation of amniotic fluid mesenchymal stem cells. *J. Neonatal Perinatal Med.* 10: 313-323.
5. Pereira, R.C., et al. 2018. Impaired osteocyte maturation in the pathogenesis of renal osteodystrophy. *Kidney Int.* 94: 1002-1012.
6. Ungaro, F., et al. 2019. Lymphatic endothelium contributes to colorectal cancer growth via the soluble matrix component GDF11. *Int. J. Cancer* 145: 1913-1920.
7. Zhou, Y., et al. 2021. Stable long-term culture of human distal airway stem cells for transplantation. *Stem Cells Int.* 2021: 9974635.
8. Rüttsche, D., et al. 2022. The role of CD200-CD200 receptor in human blood and lymphatic endothelial cells in the regulation of skin tissue inflammation. *Cells* 11:1055.
9. Zeng, Q., et al. 2023. Spleen fibroblastic reticular cell-derived acetylcholine promotes lipid metabolism to drive autoreactive B cell responses. *Cell Metab.* 35: 837-854.e8.



See **podoplanin (E-1): sc-376695** for podoplanin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.