

podoplanin (B-11): sc-166906

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.

CHROMOSOMAL LOCATION

Genetic locus: PDPN (human) mapping to 1p36.21; Pdpn (mouse) mapping to 4 E1.

SOURCE

podoplanin (B-11) is a mouse monoclonal antibody raised against amino acids 1-172 representing full length podoplanin of mouse 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.

podoplanin (B-11) is available conjugated to agarose (sc-166906 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166906 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166906 PE), fluorescein (sc-166906 FITC), Alexa Fluor® 488 (sc-166906 AF488), Alexa Fluor® 546 (sc-166906 AF546), Alexa Fluor® 594 (sc-166906 AF594) or Alexa Fluor® 647 (sc-166906 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166906 AF680) or Alexa Fluor® 790 (sc-166906 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, podoplanin (B-11) is available conjugated to biotin (sc-166906 B), 200 µg/ml, for WB, IHC(P) and ELISA.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

podoplanin (B-11) is recommended for detection of podoplanin 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), 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 podoplanin siRNA (h): sc-62834, podoplanin siRNA (m): sc-44756, podoplanin shRNA Plasmid (h): sc-62834-SH, podoplanin shRNA Plasmid (m): sc-44756-SH, podoplanin shRNA (h) Lentiviral Particles: sc-62834-V and podoplanin shRNA (m) Lentiviral Particles: sc-44756-V.

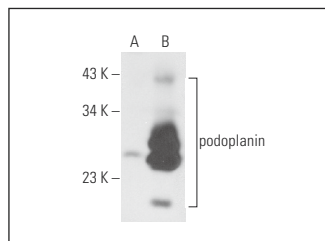
Molecular Weight of podoplanin: 43 kDa.

Positive Controls: mouse kidney extract: sc-2255, ARPE-19 whole cell lysate: sc-364357 or podoplanin (m): 293T Lysate: sc-125842.

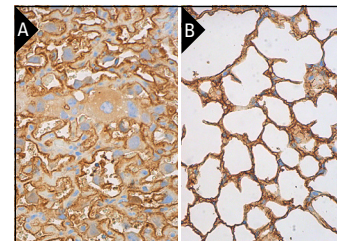
STORAGE

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

DATA



podoplanin (B-11): sc-166906. Western blot analysis of podoplanin expression in non-transfected: sc-117752 (A) and mouse podoplanin transfected: sc-125842 (B) 293T whole cell lysates.



podoplanin (B-11): sc-166906. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse placenta tissue showing membrane and cytoplasmic staining of trophoblastic cells and cytoplasmic staining of decidua cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse lung tissue showing membrane and cytoplasmic staining of pneumocytes and macrophages (B).

SELECT PRODUCT CITATIONS

- Wang, H., et al. 2018. ALS-associated mutation SOD1^{G93A} leads to abnormal mitochondrial dynamics in osteocytes. *Bone* 106: 126-138.
- Evans, R., et al. 2019. Integrin-mediated macrophage adhesion promotes lymphovascular dissemination in breast cancer. *Cell Rep.* 27: 1967-1978.e4.
- Esposito, E., et al. 2019. Brain-to-cervical lymph node signaling after stroke. *Nat. Commun.* 10: 5306.
- Gao, C., et al. 2020. Platelet CLEC-2 regulates neuroinflammation and restores blood brain barrier integrity in a mouse model of traumatic brain injury. *J. Neurochem.* 154: 190-204.
- Ren, Z., et al. 2021. *Ageratina adenophora* inhibits spleen immune function in rats via the loss of the FRC network and Th1-Th2 cell ratio elevation. *Toxins* 13: 309.
- Dong, Z., et al. 2021. Inhibition of the Wnt/β-catenin signaling pathway reduces autophagy levels in complement treated podocytes. *Exp. Ther. Med.* 22: 737.
- Al Hosni, R., et al. 2022. Reprogramming bone progenitor identity and potency through control of collagen density and oxygen tension. *iScience* 25: 104059.
- Han, L., et al. 2022. Uterus globulin associated protein 1 (UGRP1) binds podoplanin (PDPN) to promote a novel inflammation pathway during *Streptococcus pneumoniae* infection. *Clin. Transl. Med.* 12: e850.
- Lee, N., et al. 2024. Protocol to isolate and characterize pulmonary-specific extracellular vesicles in mice. *STAR Protoc.* 5: 103183.

RESEARCH USE

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