Product Datasheet

Podoplanin Antibody
NB600-1015SS

Unit Size: 0.025 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

Reviews: 1 Publications: 15

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Updated 6/15/2014 v.20.1

NB600-1015SS

Podoplanin Antibody (8.1.1)

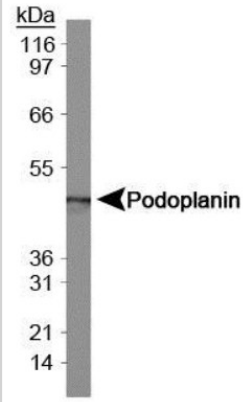
Product Information	
Unit Size	0.025 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	8.1.1
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	40 kDa

Product Description	
Host	Golden Syrian Hamster
Gene ID	10630
Gene Symbol	PDPN
Species	Mouse, Human (Negative)
Species Reactivity	Mouse. Does not cross-react with human.
Marker	Lymphatic Endothelium Marker
Immunogen	Murine thymic stromal cell lines

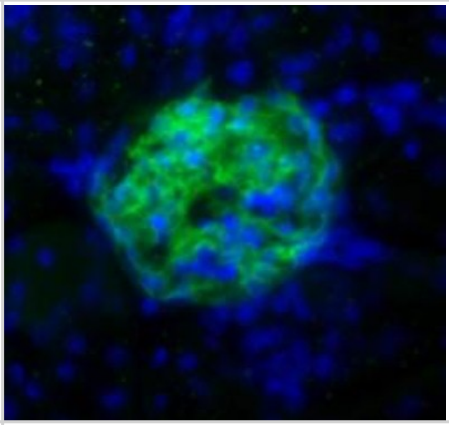
Product Application Details	
Applications	Western Blot, Electron Microscopy, Flow Cytometry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Electron Microscopy, Flow Cytometry 1:400, Immunocytochemistry/Immunofluorescence 1-5ug/ml, Immunohistochemistry 1:100-1:500, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin 1:100-1:500, Immunoprecipitation 1:10-1:500, Western Blot 1:1000-1:2000
Application Notes	This Podoplanin (8.1.1) antibody is useful in Flow Cytometry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry on paraffin-embedded sections. Electron Microscopy and Immunohistochemistry-Frozen were reported in scientific literature. Immunoprecipitation and Western Blot, where a band can be seen at ~40 kDa. Optimal dilutions/concentrations should be determined by the end user.

Images

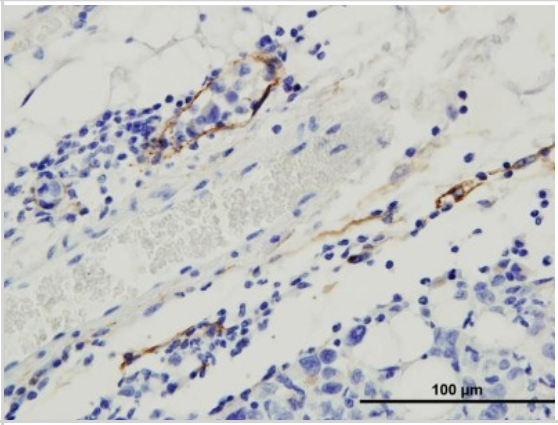
Western Blot: Podoplanin Antibody (8.1.1) [NB600-1015] - Analysis of Podoplanin in mouse kidney tissue extract.



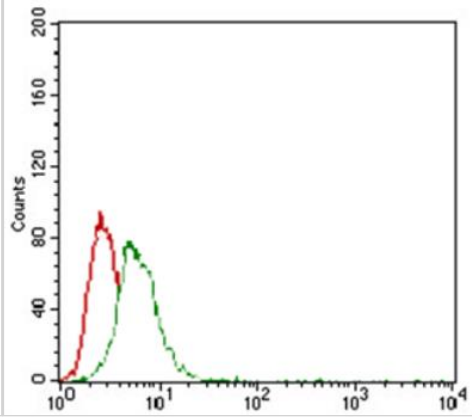
Immunocytochemistry/Immunofluorescence: Podoplanin Antibody (8.1.1) [NB600-1015] - Podoplanin (8.1.1) antibody labeling (green) of glomeruli from mouse kidney. Nuclei were counterstained with Dapi (blue).



Immunohistochemistry-Paraffin: Podoplanin Antibody (8.1.1) [NB600-1015] - Analysis of Podoplanin in mouse mammary gland after MDA-MB-231 orthotopic transplantation. Image courtesy of product review by Luana Schito.



Flow Cytometry: Podoplanin Antibody (8.1.1) [NB600-1015] - Podoplanin antibody was tested at 1:400 in A431 cells using an Alexa Fluor 488 secondary (shown in green) alongside unstained cells (shown in red).



Publications

Jia Y, Chen K, Lin P et al. Treatment of acute lung injury by targeting MG53-mediated cell membrane repair. Nat Commun 2014 Jul 18 [PMID: 25034454] (IHC-P, Mouse)

Details:
Podoplanin/AT1 alpha antibody used in IHC-P as a specific cell marker for type I alveolar epithelial cells in lungs of wild-type and mg53-/- mice - tissue fixed in 4% neutral-buffered paraformaldehyde for 24 hous at 4C, paraffin blocks cut into 4um sections, staining detection with IF labelled secondary (Figure 1e and 1f; Supplementary Figure 2).

Sargent LM, Porter DW, Staska LM et al. Promotion of lung adenocarcinoma following inhalation exposure to multi-walled carbon nanotubes. Part Fibre Toxicol 2014 Jan 15 [PMID: 24405760] (IHC-P, Mouse)

Porter DW, Hubbs AF, Mercer RR et al. Mouse pulmonary dose- and time course-responses induced by exposure to multi-walled carbon nanotubes. Toxicology 2010 Mar 10 [PMID: 19857541] (IHC, ICC/IF, Mouse)

Kabgani N, Grigoleit T, Schulte K, Sechi A, Sauer-Lehnen S, Tag C, Boor P, Kuppe C, Warsow G, Schordan S, Mostertz J, Chilukoti RK, Homuth G, Endlich N, Tacke F, Weiskirchen R, Fuellen G, Endlich K, Floege J, Smeets B, Moeller MJ. Primary cultures of glomerular parietal epithelial cells or podocytes with proven origin. PLoS One;7(4). 2012 [PMID: 22529955] (WB, Mouse)

Mahtab EA, Vicente-Steijn R, Hahurij ND, Jongbloed MR, Wisse LJ, DeRuiter MC, Uhrin P, Zaujec J, Binder BR, Schalij MJ, Poelmann RE, Gittenberger-de Groot AC. Podoplanin deficient mice show a RhoA-related hypoplasia of the sinus venosus myocardium including the sinoatrial node. Dev Dyn238(1):183-93. 2009 Jan. [PMID: 19097191]

Mahtab EA, Wijffels MC, Van Den Akker NM, Hahurij ND, Lie-Venema H, Wisse LJ, Deruiter MC, Uhrin P, Zaujec J, Binder BR, Schalij MJ, Poelmann RE, Gittenberger-De Groot AC. Cardiac malformations and myocardial abnormalities in podoplanin knockout mouse embryos: Correlation with abnormal epicardial development. Dev Dyn237(3):847-57. 2008 Mar. [PMID: 18265012]

Withers DR, Kim MY, Bekiaris V, Rossi SW, Jenkinson WE, Gaspal F, McConnell F, Caamano JH, Anderson G, Lane PJ. The role of lymphoid tissue inducer cells in splenic white pulp development. Eur J Immunol37(11):3240-5. 2007 Nov. [PMID: 17948268]

Hara T, Katakai T, Lee JH, Nambu Y, Nakajima-Nagata N, Gonda H, Sugai M, Shimizu A. A transmembrane chemokine, CXC chemokine ligand 16, expressed by lymph node fibroblastic reticular cells has the potential to regulate T cell migration and adhesion. Int Immunol;18(2):301-11. 2006 Feb. [PMID: 16410312]

Schacht V, Dadras SS, Johnson LA, Jackson DG, Hong YK, Detmar M. Up regulation of the lymphatic marker podoplanin, a mucin-type transmembrane glycoprotein, in human squamous cell carcinomas and germ cell tumors. Am J Pathol;166(3):913-21. 2005 Mar. [PMID: 15743802] (IHC-P, Mouse)

Farr A, Nelson A, Hosier S. Characterization of an antigenic determinant preferentially expressed by type I epithelial cells in the murine thymus. J Histochem Cytochem;40(5):651-64. 1992 May. [PMID: 1374092]

Crnic I, Strittmatter K, Cavallaro U, Kopfstein L, Jussila L, Alitalo K, Christofori G. Loss of neural cell adhesion molecule induces tumor metastasis by up-regulating lymphangiogenesis. Cancer Res;64(23):8630-8. 2004 Dec 1. [PMID: 15574770] (IHC-P, Mouse)

Farr AG, Berry ML, Kim A, Nelson AJ, Welch MP, Aruffo A. Characterization and cloning of a novel glycoprotein expressed by stromal cells in T-dependent areas of peripheral lymphoid tissues. J Exp Med;176(5):1477-82. 1992 Nov 1. [PMID: 1402691] (WB, IHC-Fr, Mouse)

More publications at http://www.novusbio.com/NB600-1015

Procedures

Protocol specific for Podoplanin (811) Antibody (NB600-1015)
Western Blot Protocol
1. Perform SDS-PAGE (4-12% MOPS) on samples to be analyzed, loading 25 ug of total protein per lane.
2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.
3. Rinse membrane with dH2O and then stain the blot using Ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.
4. Rinse the blot in TBS for approximately 5 minutes.
5. Block the membrane using 5% NFDM + 1% BSA in TBS + Tween, 1 hour at RT.
6. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
7. Dilute the anti-Podoplanin primary antibody (NB600-1015) in blocking buffer and incubate 1 hour at room temperature.
8. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
9. Apply the diluted hamster-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions (Pierce ECL).
Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.

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Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

For more information on our guarantee, please visit www.novusbio.com/guarantee.