Podoplanin Monoclonal Antibody (eBio8.1.1 (8.1.1)), eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Mouse, Rat
Published Species	Rat, Hamster, Mouse, Human
Host/Isotype	Syrian hamster / IgG
Class	Monoclonal
Type	Antibody
Clone	eBio8.1.1 (8.1.1)
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4° C
RRID	AB_1210505

Applications	Tested Dilution	Publications
Western Blot (WB)	1 µg/mL	2 Publications
Immunohistochemistry (IHC)	Assay-Dependent	16 Publications
Immunohistochemistry (PFA fixed) (IHC (PFA))	-	1 Publication
Immunohistochemistry (Frozen) (IHC (F))	-	1 Publication
Immunocytochemistry (ICC/IF)	-	10 Publications
Flow Cytometry (Flow)	0.5 µg/test	18 Publications
Immunoprecipitation (IP)	Assay-Dependent	-
Functional Assay (FN)	-	1 Publication

Product Specific Information

Description: The 8.1.1 monoclonal antibody reacts with mouse podoplanin (T1a, gp38, aggrus), a 43 kDa transmembrane glycoprotein, named for its expression in kidney glomerular epithelial cells (podocytes). In addition, Podoplanin is expressed in epithelial and mesothelial cells such as intestinal epithelium, alveolar type I cells, podocytes, and mesothelium of the visceral peritoneum. It was also shown to be a potent marker for lymphatic endothelium. Podoplanin is also expressed by subcapsular epithelial cells of the murine thymus. Mice deficient in Podoplanin die at birth because of a respiratory defect and congenital lymphedema due to a failure in lymphatic pattern formation.

Applications Reported: This eBio8.1.1 (8.1.1) antibody has been reported for use in flow cytometric analysis, immunoprecipitation, immunoblotting (WB), and immunohistochemical staining.

Applications Tested: This eBio8.1.1 (8.1.1) antibody has been tested by flow cytometric analysis of TE-71 cells. This can be used at less than or equal to 0.5 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is

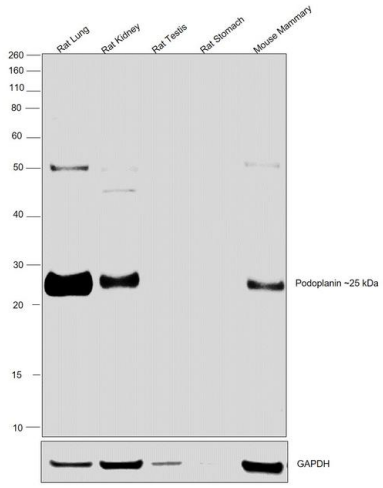
recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Purity: Greater than 90%, as determined by SDS-PAGE.

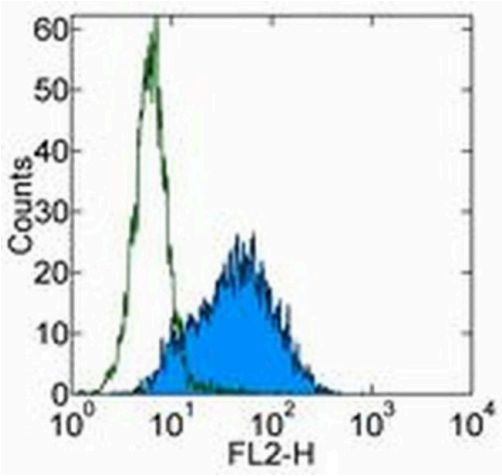
Aggregation: Less than 10%, as determined by HPLC.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For Podoplanin Monoclonal Antibody (eBio8.1.1 (8.1.1)), eBioscience™



Podoplanin Antibody (14-5381-82) in WB
Western blot was performed using Anti-Podoplanin Monoclonal Antibody (eBio8. 1.1 (8.1.1)), (Product # 14-5381-85) and ~25 kDa band corresponding to Podoplanin was observed in Rat Lung, Rat Kidney and Mouse Mammary gland but not in Rat Testis and Rat Stomach as reported. Tissue lysate (40 µg lysate) of Rat Lung (Lane 1), Rat Kidney (Lane 2), Rat Testis (Lane 3), Rat Stomach (Lane 4) and Mouse Mammary Gland (Lane 5) were electrophoresed using Novex® NuPAGE® 4-12 % Bis-Tris gel (Product # NP0321BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1 µg/mL) and detected by chemiluminescence with Rabbit anti-Hamster IgG (H+L) Secondary Antibody, HRP (Product # A18889, 1:4000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Super Signal™ West Dura Extended Duration Substrate (Product # 34076).



Podoplanin Antibody (14-5381-82) in Flow
Staining of TE-71 cell line with 0.25 µg of Golden Syrian Hamster IgG Isotype Control Purified (Product # 14-4914-81) (open histogram) or 0.25 µg of Anti-Mouse Podoplanin Purified (filled histogram) followed by Anti-Golden Syrian Hamster IgG Biotin (Product # 13-4213) and Streptavidin PE (Product # 12-4317-87). Total viable cells were used for analysis.

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49 References

Western Blot (2)

Blood

Mice with a deficiency in CLEC-2 are protected against deep vein thrombosis.

"14-5381 was used in Western Blotting to identify a novel mechanism of deep vein thrombosis, whereby CLEC-2 and podoplanin upregulation in the venous wall trigger thrombus formation."

Authors: Payne H,Ponomaryov T,Watson SP,Brill A

Year
2017

Species
Mouse

The Journal of biological chemistry

Deletion of tetraspanin CD9 diminishes lymphangiogenesis in vivo and in vitro.

"14-5381 was used in Western Blotting to demonstrate that tetraspanin CD9 modulates molecular organization of integrins in lymphatic endothelial cells, thereby supporting several functions required for lymphangiogenesis."

Authors: Iwasaki T,Takeda Y,Maruyama K,Yokosaki Y,Tsujino K,Tetsumoto S,Kuhara H,Nakanishi K,Otani Y,Jin Y, Kohmo S,Hirata H,Takahashi R,Suzuki M,Inoue K,Nagatomo I,Goya S,Kijima T,Kumagai T,Tachibana I,Kawase I, Kumanogoh A

Year
2013

Species
Mouse

Immunohistochemistry (16)

Bioengineering & translational medicine

Vascularized lymph node transplantation successfully reverses lymphedema and maintains immunity in a rat lymphedema model.

"Published figure using Podoplanin monoclonal antibody (Product # 14-5381-82) in Immunohistochemistry"

Authors: Sakarya AH,Huang CW,Yang CY,Hsiao HY,Chang FC,Huang JJ

Year
2022

Science advances

CRISPR interference interrogation of COPD GWAS genes reveals the functional significance of desmoplakin in iPSC-derived alveolar epithelial cells.

"14-5381-82 was used in Immunohistochemistry-immunofluorescence to apply CRISPR interference to interrogate the function of nine genes implicated in COPD by GWAS in induced pluripotent stem cell-derived type 2 alveolar epithelial cells."

Authors: Werder RB,Liu T,Abo KM,Lindstrom-Vautrin J,Villacorta-Martin C,Huang J,Hinds A,Boyer N,Bullitt E,Liesa M, Silverman EK,Kotton DN,Cho MH,Zhou X,Wilson AA

Year
2022

Species
Mouse

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IHC (PFA) (1) **IHC (F) (1)** **ICC/IF (10)** **Flow (18)** **FN (1)**