P.O. Box 3286 - Logan, Utah 84323, U.S.A. - Tel. (800) 729-8350 – Tel. (435) 755-9848 - Fax (435) 755-0015 - www.scytek.com

Podoplanin (Lymphatic Endothelium & Alveolar Epithelial Marker); Clone PDPN/601 (Concentrate)

Availability/Contents:

Item #	Volume
RA0351-C.5	0.5 ml

Description:

Species:	Rat
Immunogen:	Recombinant fragment containing platelet-aggregation-stimulating (PLAG) domain of HUMAN podoplanin
Clone:	PDPN/601
Isotype:	IgG2a
Entrez Gene ID:	10630 (Human)
Hu Chromosome Loc.:	1p36.21
Synonyms:	Aggrus; Glycoprotein 36 (gp36); GP38; GP40; HT1A1; hT1alpha1; hT1alpha2; Lung type I cell membrane associated glycoprotein T1A 2; OTS8; PA2.26; T1-alpha; TIA2
Mol. Weight of Antigen:	36kDa
Format:	200µg/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Specificity:	This antibody recognizes the platelet aggregation-stimulating (PLAG) domain of podoplanin.
Background:	Podoplanin is a 36kDa (human) mucin-type glycoprotein with a high content of sialic acid. The C-type lectin-like receptor 2 (CLEC-2) is the specific receptor for podoplanin, which mediates the platelet aggregation without blood coagulation factors and plasma components. Podoplanin consists of an extracellular domain rich in serine and threonine residues, a transmembrane domain, and a cytoplasmic tail for protein kinase C and cAMP phosphorylation. Podoplanin was first identified as an antigen of the podocyte, the kidney glomerular epithelial cell, and is also known as a marker of lymphatic endothelium and alveolar epithelium. Lymphatic endothelial cells, but not vascular endothelial cells, differentially express podoplanin. There has also been reports that podoplanin is expressed in osteocytes and osteoblasts, mesothelial cells, epidermal basal layer cells, tooth germ epithelial cells, salivary gland myoepithelium, thymus type I epithelial cells, prostate myofibroblasts, follicular dendritic cells, and immature cells such as fetal germ cells or developing Sertoli cells. Podoplanin expression is positively correlated with tumors expressing greater invasive and metastatic potential. Therefore, podoplanin could be valuable as an anti-cancer target. The development of antibodies which recognize the PLAG domain strongly may especially contribute to anti-metastasis therapies against podoplanin-positive tumors.
Species Reactivity:	Human, Monkey and Gorilla. Does not react with Mouse, Rat, and Hamster. Others not known.
Positive Control:	NCCIT cells. Kidney, placenta, lung, skeletal muscle and brain.
Cellular Localization:	Cell Surface
Titer/ Working Dilution:	Immunohistochemistry (Frozen and Formalin-fixed): 0.5-1 µg/ml Flow Cytometry: 0.5-1 µg/million cells Immunofluorescence: 0.5-1 µg/ml Western Blotting: 0.5-1 µg/ml Immunoprecipitation: 0.5-1 µg/500µg protein lysate
Microbiological State:	This product is not sterile.

Storage: 2° C – 8° C

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Uses/Limitations:

Not to be taken internally.
For Research Use Only.
This product is intended for qualitative immunohistochemistry with normal and neoplastic formalin-fixed, paraffin-embedded tissue sections, to be viewed by light microscopy.
Do not use if reagent becomes cloudy.
Do not use past expiration date.
Non-Sterile.

Ordering Information and Current Pricing at www.scytek.com

Procedure:

1. **Tissue Section Pretreatment (Required):** Staining of formalin fixed, paraffin embedded tissue sections is significantly enhanced by pretreatment with Citrate Plus (ScyTek catalog# CPL500).

2. **Primary Antibody Incubation Time:** We suggest an incubation period of 30 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user.

3. **Visualization:** For maximum staining intensity we recommend the "UltraTek HRP Anti-Polyvalent Lab Pack" (ScyTek catalog# UHP125, see IFU for instructions) combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).

Precautions:

Contains Sodium Azide as a preservative (0.09% w/v).
Do not pipette by mouth.
Avoid contact of reagents and specimens with skin and mucous membranes.
Avoid microbial contamination of reagents or increased nonspecific staining may occur.
This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.

References:

1. Kaneko M. K., Kato Y., Kitano T., Osawa M. Conservation of a platelet activating domain of Aggrus/podoplanin as a platelet aggregation-inducing factor. Gene. 2006;378:52–57.

Warranty:

No products or "Instructions For Use (IFU)" are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our IFU or website. Our warranty is limited to the actual price paid for the product. ScyTek Laboratories, Inc. is not liable for any property damage, personal injury, time or effort or economic loss caused by our products. Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used.

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