

Datasheet: MCA2370

**BATCH NUMBER 168775**

<b>Description:</b>	MOUSE ANTI HUMAN PODOPLANIN
<b>Specificity:</b>	PODOPLANIN
<b>Other names:</b>	AGGRUS
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	4D5aE5E6
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.1 mg

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen	▪			0.75ug/ml - 2ug/ml
Immunohistology - Paraffin (1)	▪			
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

**(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.**

<b>Target Species</b>	Human
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline

<b>Preservative Stabilisers</b>	< 0.1% sodium azide (NaN <sub>3</sub> )
<b>Approx. Protein Concentrations</b>	IgG concentration 1mg/ml
<b>Immunogen</b>	ORF Human podoplanin ectodomain expressed in <i>E.coli</i> .
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q86YL7</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">10630</a>    PDPN    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	GP36
<b>RRID</b>	AB_2161944
<b>Specificity</b>	<p><b>Mouse anti Human podoplanin antibody, clone 4D5aE5E6</b> recognizes human podoplanin also known as gp36, Aggrus, PA2.26 antigen or T1 alpha. Podoplanin is a 140 amino acid ~36 kDa single pass, type I cell membrane-associated glycoprotein, with a broad spectrum of distribution. Podoplanin is strongly expressed on the lymphatic endothelium found in lung, placenta and skeletal muscle and to a lesser extent in brain, kidney and liver.</p> <p>Podoplanin is preferentially expressed on lymphatic and absent on blood endothelium (<a href="#">Breiteneder-Geleff et al. 1999</a>) and therefore Mouse anti Human podoplanin antibody, clone 4D5aE5E6 is readily able to distinguish between lymphatic vessels and blood vasculature. Podoplanin is reported to be a reliable indicator of tumour lymphangiogenesis (<a href="#">Kitano et al. 2010</a>).</p>
<b>Histology Positive Control Tissue</b>	Human lung
<b>References</b>	<ol style="list-style-type: none"> <li>1. Furtado, G.C. <i>et al.</i> (2007) Lymphotoxin beta receptor signaling is required for inflammatory lymphangiogenesis in the thyroid. <a href="#">Proc Natl Acad Sci U S A. 104 (12): 5026-31.</a></li> <li>2. Pardo, J. <i>et al.</i> (2007) Pseudomesotheliomatous carcinoma of the lung with a distinct morphology, immunohistochemistry, and comparative genomic hybridization profile. <a href="#">Ann Diagn Pathol. 11 (4): 241-51.</a></li> <li>3. Link, A. <i>et al.</i> (2011) Association of T-zone reticular networks and conduits with ectopic lymphoid tissues in mice and humans. <a href="#">Am J Pathol. 178 (4): 1662-75.</a></li> <li>4. Gu, Y. <i>et al.</i> (2008) Lymphangiogenesis induced by VEGF-C and VEGF-D promotes metastasis and a poor outcome in breast carcinoma: a retrospective study of 61 cases. <a href="#">Clin Exp Metastasis. 25 (7): 717-25.</a></li> <li>5. Ra, S.H. <i>et al.</i> (2007) Recurrent hepatic lymphangiomas after orthotopic liver transplantation. <a href="#">Liver Transpl. 13 (11): 1593-7.</a></li> <li>6. Siggel, R. <i>et al.</i> (2020) Absence of lymphatic vessels in non-functioning bleb capsules</li> </ol>

of glaucoma drainage devices. [Histol Histopathol. 35 \(12\): 1521-31.](#)

- Further Reading**
1. Matsui, K. *et al.* (2003) Lymphatic microvessels in the rat remnant kidney model of renal fibrosis: aminopeptidase p and podoplanin are discriminatory markers for endothelial cells of blood and lymphatic vessels. [J Am Soc Nephrol. 14 \(8\): 1981-9.](#)
  2. Dadras, S.S. *et al.* (2003) Tumor lymphangiogenesis: a novel prognostic indicator for cutaneous melanoma metastasis and survival. [Am J Pathol. 162 \(6\): 1951-60.](#)
  3. Kato, Y. *et al.* (2003) Molecular identification of Aggrus/T1alpha as a platelet aggregation-inducing factor expressed in colorectal tumors. [J Biol Chem. 278 \(51\): 51599-605.](#)
  4. Schacht, V. *et al.* (2003) T1alpha/podoplanin deficiency disrupts normal lymphatic vasculature formation and causes lymphedema. [EMBO J. 22 \(14\): 3546-56.](#)
  5. Zimmer, G. *et al.* (1999) Cloning and characterization of gp36, a human mucin-type glycoprotein preferentially expressed in vascular endothelium. [Biochem J. 341 \( Pt 2\): 277-84.](#)

**Storage** This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

**Guarantee** 12 months from date of despatch

**Health And Safety Information** Material Safety Datasheet documentation #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2370>  
10040

**Regulatory** For research purposes only

## Related Products

### Recommended Secondary Antibodies

- Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
- Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)
- Goat Anti Mouse IgG (STAR76...) [RPE](#)
- Goat Anti Mouse IgG (STAR70...) [FITC](#)
- Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),  
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),  
[FITC](#), [HRP](#)
- Goat Anti Mouse IgG (STAR77...) [HRP](#)
- Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
- Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
- Rabbit Anti Mouse IgG (STAR13...) [HRP](#)

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)

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**Printed on 29 Aug 2024**

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