

Datasheet: MCA2370

Description:	MOUSE ANTI HUMAN PODOPLANIN
Specificity:	PODOPLANIN
Other names:	AGGRUS
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	4D5aE5E6
Isotype:	IgG1
Quantity:	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.

	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.

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

Preservative Stabilisers	< 0.1% sodium azide (NaN ₃)
Approx. Protein Concentrations	IgG concentration 1mg/ml
Immunogen	ORF Human podoplanin ectodomain expressed in <i>E.coli</i> .
External Database Links	<p>UniProt: Q86YL7 Related reagents</p> <p>Entrez Gene: 10630 PDPN Related reagents</p>
Synonyms	GP36
RRID	AB_2161944
Specificity	<p>Mouse anti Human podoplanin antibody, clone 4D5aE5E6 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 (Breiteneder-Geleff et al. 1999) 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 (Kitano et al. 2010).</p>
Histology Positive Control Tissue	Human lung
References	<ol style="list-style-type: none"> 1. Furtado, G.C. <i>et al.</i> (2007) Lymphotoxin beta receptor signaling is required for inflammatory lymphangiogenesis in the thyroid. Proc Natl Acad Sci U S A. 104 (12): 5026-31. 2. Pardo, J. <i>et al.</i> (2007) Pseudomesotheliomatous carcinoma of the lung with a distinct morphology, immunohistochemistry, and comparative genomic hybridization profile. Ann Diagn Pathol. 11 (4): 241-51. 3. Link, A. <i>et al.</i> (2011) Association of T-zone reticular networks and conduits with ectopic lymphoid tissues in mice and humans. Am J Pathol. 178 (4): 1662-75. 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. Clin Exp Metastasis. 25 (7): 717-25. 5. Ra, S.H. <i>et al.</i> (2007) Recurrent hepatic lymphangiomatosis after orthotopic liver transplantation. Liver Transpl. 13 (11): 1593-7. 6. Siggel, R. <i>et al.</i> (2020) Absence of lymphatic vessels in non-functioning bleb capsules

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 \(MCA928\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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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

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