

# Datasheet: MCA1856GA

**BATCH NUMBER 154013**

<b>Description:</b>	MOUSE ANTI HUMAN CD151
<b>Specificity:</b>	CD151
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	11G5a
<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	▪			1/50 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin (1)	▪			1/100
ELISA	▪			
Immunoprecipitation	▪			
Western Blotting (2)	▪			
Immunofluorescence	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody 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.**

**(2) Clone 11G5a recognises human CD151 under non-reducing conditions.**

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

<b>Preservative Stabilisers</b>	0.09% Sodium Azide
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P48509</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">977</a>    CD151    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	TSPAN24
<b>RRID</b>	AB_323707
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the X63.Ag8.653 mouse myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human CD151 antibody, clone 11G5a</b> recognizes the human CD151 cell surface antigen, also known as PETA-3. CD151 is expressed by epithelial cells, endothelial cells, platelets, megakaryocytes, monocytes and in the renal glomeruli and proximal and distal tubules. CD151 is not expressed by lymphocytes or granulocytes. More recently CD151 has also been shown to be expressed by erythrocytes, and to carry the MER2 blood group antigen (<a href="#">Crew <i>et al.</i> 2004</a>).</p> <p>It should be noted that CD151 is very closely associated with the alpha3 beta1 integrin in cells and co-immunoprecipitation may occur even in quite stringent conditions (<a href="#">Yauch. <i>et al.</i> 1998</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells or 100ul whole blood
<b>Histology Positive Control Tissue</b>	Tonsil/spleen
<b>References</b>	<ol style="list-style-type: none"> <li>1. Karamatic Crew, V. <i>et al.</i> (2004) CD151, the first member of the tetraspanin (TM4) superfamily detected on erythrocytes, is essential for the correct assembly of human basement membranes in kidney and skin. <a href="#">Blood. 104 (8): 2217-23.</a></li> <li>2. Ke, A.W. <i>et al.</i> (2011) CD151 amplifies signaling by integrin α6β1 to PI3K and induces the epithelial-mesenchymal transition in HCC cells. <a href="#">Gastroenterology. 140: 1629-41.e15.</a></li> <li>3. Zheng, Z. &amp; Liu, Z. (2006) CD151 gene delivery activates PI3K/Akt pathway and promotes neovascularization after myocardial infarction in rats. <a href="#">Mol Med. 12 (9-10): 214-20.</a></li> <li>4. Zheng, Z. &amp; Liu, Z. (2007) CD151 gene delivery increases eNOS activity and induces ECV304 migration, proliferation and tube formation. <a href="#">Acta Pharmacol Sin. 28 (1): 66-72.</a></li> <li>5. Franco, M. <i>et al.</i> (2010) The tetraspanin CD151 is required for Met-dependent signaling</li> </ol>

- and tumor cell growth. [J Biol Chem. 285 \(50\): 38756-64.](#)
6. Hasegawa, M. *et al.* (2007) CD151 dynamics in carcinoma-stroma interaction: integrin expression, adhesion strength and proteolytic activity. [Lab Invest. 87: 882-92.](#)
  7. Spoden, G. *et al.* (2008) Clathrin- and caveolin-independent entry of human papillomavirus type 16--involvement of tetraspanin-enriched microdomains (TEMs). [PLoS One. 3: e3313.](#)
  8. Huang, X.Y. *et al.* (2010) Overexpression of CD151 as an adverse marker for intrahepatic cholangiocarcinoma patients. [Cancer. 116: 5440-51.](#)
  9. Ke, A.W. *et al.* (2009) Role of overexpression of CD151 and/or c-Met in predicting prognosis of hepatocellular carcinoma. [Hepatology. 49: 491-503.](#)
  10. Devbhandari, R.P. *et al.* (2011) Profiling of the tetraspanin CD151 web and conspiracy of CD151/integrin  $\beta 1$  complex in the progression of hepatocellular carcinoma. [PLoS One. 6: e24901.](#)
  11. Shi, G.M. *et al.* (2010) CD151 modulates expression of matrix metalloproteinase 9 and promotes neoangiogenesis and progression of hepatocellular carcinoma. [Hepatology. 52: 183-96.](#)
  12. Nishiuchi, R. *et al.* (2005) Potentiation of the ligand-binding activity of integrin  $\alpha 3\beta 1$  via association with tetraspanin CD151. [Proc Natl Acad Sci U S A. 102: 1939-44.](#)
  13. Qiao, Y. *et al.* (2017) CD151, a laminin receptor showing increased expression in asthmatic patients, contributes to airway hyperresponsiveness through calcium signaling. [J Allergy Clin Immunol. 139 \(1\): 82-92.e5.](#)
  14. Hochdorfer, D. *et al.* (2016) Tetraspanin CD151 Promotes Initial Events in Human Cytomegalovirus Infection. [J Virol. 90 \(14\): 6430-42.](#)
  15. Wadkin, J.C.R. *et al.* (2017) CD151 supports VCAM-1-mediated lymphocyte adhesion to liver endothelium and is upregulated in chronic liver disease and hepatocellular carcinoma. [Am J Physiol Gastrointest Liver Physiol. 313 \(2\): G138-G149.](#)
  16. Burkard, C. *et al.* (2017) Precision engineering for PRRSV resistance in pigs: Macrophages from genome edited pigs lacking CD163 SRCR5 domain are fully resistant to both PRRSV genotypes while maintaining biological function. [PLoS Pathog. 13 \(2\): e1006206.](#)
  17. Yang, Y.M. *et al.* (2013) Overexpression of CD151 predicts prognosis in patients with resected gastric cancer. [PLoS One. 8 \(3\): e58990.](#)

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#### Further Reading

1. Kwon, M.J. *et al.* (2012) Clinical significance of CD151 overexpression in subtypes of invasive breast cancer. [Br J Cancer. 106: 923-30.](#)
2. Yauch, R.L. *et al.* (1998) Highly stoichiometric, stable, and specific association of integrin  $\alpha 3\beta 1$  with CD151 provides a major link to phosphatidylinositol 4-kinase, and may regulate cell migration. [Mol Biol Cell. 9 \(10\): 2751-65.](#)

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#### Storage

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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#### Guarantee

12 months from date of despatch

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**Health And Safety Information**      Material Safety Datasheet documentation #10040 available at:  
<https://www.bio-rad-antibodies.com/SDS/MCA1856GA>  
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**Regulatory**      For research purposes only

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## 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](#)  
Rabbit Anti Mouse IgG (STAR13...)      [HRP](#)  
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)  
Rabbit Anti Mouse IgG (STAR9...)      [FITC](#)  
Goat Anti Mouse IgG (STAR77...)      [HRP](#)  
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),  
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),  
[FITC](#), [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://www.bio-rad-antibodies.com/datasheets)  
'M365826:200529'

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