Datasheet: MCA1856GA

BATCH NUMBER 162459

Description:	MOUSE ANTI HUMAN CD151
Specificity:	CD151
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	11G5a
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	▪			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.**

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

Preservative Stabilisers	0.09% Sodium Azide
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
External Database Links	**UniProt:** P48509 Related reagents **Entrez Gene:** 977 CD151 Related reagents
Synonyms	TSPAN24
RRID	AB_323707
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the X63.Ag8.653 mouse myeloma cell line.
Specificity	**Mouse anti Human CD151 antibody, clone 11G5a** 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 (Crew *et al.* 2004). 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 (Yauch. *et al.* 1998).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells or 100ul whole blood
Histology Positive Control Tissue	Tonsil/spleen
References	1. Karamatic Crew, V. *et al.* (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. Blood. 104 (8): 2217-23. 2. Ke, A.W. *et al.* (2011) CD151 amplifies signaling by integrin α6β1 to PI3K and induces the epithelial-mesenchymal transition in HCC cells. Gastroenterology. 140: 1629-41.e15. 3. Zheng, Z. & Liu, Z. (2006) CD151 gene delivery activates PI3K/Akt pathway and promotes neovascularization after myocardial infarction in rats. Mol Med. 12 (9-10): 214-20. 4. Zheng, Z. & Liu, Z. (2007) CD151 gene delivery increases eNOS activity and induces ECV304 migration, proliferation and tube formation. Acta Pharmacol Sin. 28 (1): 66-72. 5. Franco, M. *et al.* (2010) The tetraspanin CD151 is required for Met-dependent signaling

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 β1 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 alpha3beta1 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.

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 alpha3beta1 with CD151 provides a major link to phosphatidylinositol 4-kinase, and may regulate cell migration. Mol Biol Cell. 9 (10): 2751-65.

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/MCA1856GA 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
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)

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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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