Datasheet: MCA1856PE

Description:	MOUSE ANTI HUMAN CD151:RPE
Specificity:	CD151
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	11G5a
Isotype:	IgG1
Quantity:	100 TESTS

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	▪			Neat

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.

Target Species

Human

Product Form

Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized

Reconstitution

Reconstitute with 1 ml distilled water

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
RPE 488nm laser	496	578

Preparation

Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% sodium azide (NaN_3)
1% bovine serum albumin
5% sucrose

External Database Links	**UniProt:** P48509 Related reagents **Entrez Gene:** 977 CD151 Related reagents
Synonyms	TSPAN24
RRID	AB_324177
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 10µl of the suggested working dilution to label 10^6 cells or 100µl whole blood
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. 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. 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. Hasegawa, M. *et al.* (2007) CD151 dynamics in carcinoma-stroma interaction: integrin expression, adhesion strength and proteolytic activity. Lab Invest. 87: 882-92. 6. 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. 7. 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. 8. 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.

9. Huang, X.Y. *et al.* (2010) Overexpression of CD151 as an adverse marker for intrahepatic cholangiocarcinoma patients. Cancer. 116: 5440-51.
10. 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.
11. 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.
12. 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.
13. Yang, Y.M. *et al.* (2013) Overexpression of CD151 predicts prognosis in patients with resected gastric cancer. PLoS One. 8 (3): e58990.
14. Hochdorfer, D. *et al.* (2016) Tetraspanin CD151 Promotes Initial Events in Human Cytomegalovirus Infection. J Virol. 90 (14): 6430-42.
15. 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.
16. 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.
17. 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.

Further Reading	1. 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. 2. Kwon, M.J. *et al.* (2012) Clinical significance of CD151 overexpression in subtypes of invasive breast cancer. Br J Cancer. 106: 923-30.
Storage	Prior to reconstitution store at +4°C. Following reconstitution store at +4°C. DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA1856PE 20487
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:RPE (MCA928PE)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

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

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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