

Datasheet: MCA1846A647

**BATCH NUMBER 157536**

<b>Description:</b>	HAMSTER ANTI MOUSE CD81:Alexa Fluor® 647
<b>Specificity:</b>	CD81
<b>Other names:</b>	TAPA-1
<b>Format:</b>	ALEXA FLUOR® 647
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	Eat2
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	100 TESTS/1ml

## 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	▪			Neat

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.

Target Species	Mouse		
Species Cross Reactivity	Reacts with: Rat <b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.		
Product Form	Purified IgG conjugated to Alexa Fluor® 647 - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	Alexa Fluor®647	650	665
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		

<b>Preservative Stabilisers</b>	0.09% Sodium Azide 1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.05 mg/ml
<b>Immunogen</b>	38C13, murine B cell line.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P35762</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">12520</a> Cd81    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	Tapa1
<b>RRID</b>	AB_322479
<b>Fusion Partners</b>	Spleen cells from immunised Armenian hamsters were fused with cells of the mouse PX3-Ag.8.653 myeloma cell line.
<b>Specificity</b>	<p><b>Hamster anti Mouse CD81 antibody, clone Eat2</b> recognizes mouse and rat CD81, also known as TAPA-1 or Target of the antiproliferative antibody 1. CD81 is a 236 amino acid ~26 kDa multipass transmembrane protein belonging to the TM4SF family (<a href="#">UniProt: P35762</a>). In rodents CD81 is expressed at much higher levels on resting B cells than on T cells, although increased expression on T cells is found following activation. Hamster anti Mouse CD81 antibody, clone Eat2 induces homotypic aggregation of B cells and inhibits anti Ig and IL-4 induced proliferation (<a href="#">Maecker et al. 2000</a>). Eat 2 requires the presence of both extracellular loops of TAPA-1 for binding.</p> <p>Mice lacking CD81 demonstrate reduced fertility through impaired oocyte-sperm fusion, double knockout CD81<sup>-/-</sup> CD9<sup>-/-</sup> mice are completely infertile suggesting complimentary roles in oocyte-sperm fusion (<a href="#">Rubenstein et al. 2006</a>).</p>
<b>Flow Cytometry</b>	<p>Use 10ul of the suggested working dilution to label 10<sup>6</sup> cells in 100ul.</p> <p>The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR (<a href="#">BUF041A/B/C</a>).</p>
<b>References</b>	<ol style="list-style-type: none"> <li>Clark, K.L. <i>et al.</i> (2001) PGRL is a major CD81-associated protein on lymphocytes and distinguishes a new family of cell surface proteins. <a href="#">J Immunol. 167 (9): 5115-21.</a></li> <li>Maecker, H.T. <i>et al.</i> (2000) Differential expression of murine CD81 highlighted by new anti-mouse CD81 monoclonal antibodies. <a href="#">Hybridoma 19: 15-22.</a></li> <li>Conde-Vancells, J. <i>et al.</i> (2010) Candidate biomarkers in exosome-like vesicles purified from rat and mouse urine samples. <a href="#">Proteomics Clin Appl. 4 (4): 416-25.</a></li> <li>Conde-Vancells, J. <i>et al.</i> (2008) Characterization and comprehensive proteome profiling of exosomes secreted by hepatocytes. <a href="#">J Proteome Res. 7: 5157-66.</a></li> </ol>

5. Takeda, Y. *et al.* (2008) Double deficiency of tetraspanins CD9 and CD81 alters cell motility and protease production of macrophages and causes chronic obstructive pulmonary disease-like phenotype in mice. [J Biol Chem. 283: 26089-97.](#)
6. Suzuki, M. *et al.* (2009) Tetraspanin CD9 negatively regulates lipopolysaccharide-induced macrophage activation and lung inflammation. [J Immunol. 182: 6485-93.](#)
7. Ha, C.T. *et al.* (2005) Binding of pregnancy-specific glycoprotein 17 to CD9 on macrophages induces secretion of IL-10, IL-6, PGE2, and TGF-beta1. [J Leukoc Biol. 77: 948-57.](#)
8. Pan, Q. *et al.* (2011) Hepatic cell-to-cell transmission of small silencing RNA can extend the therapeutic reach of RNA interference (RNAi). [Gut. 61: 1330-9.](#)
9. Jin, Y. *et al.* (2013) Statins decrease lung inflammation in mice by upregulating tetraspanin CD9 in macrophages. [PLoS One. 8: e73706.](#)
10. Royo, F. *et al.* (2013) Transcriptome of extracellular vesicles released by hepatocytes. [PLoS One. 8: e68693.](#)
11. Owens, D.M. and Watt, F.M. (2001) Influence of beta1 integrins on epidermal squamous cell carcinoma formation in a transgenic mouse model: alpha3beta1, but not alpha2beta1, suppresses malignant conversion. [Cancer Res. 61: 5248-54.](#)
12. Jin, Y. *et al.* (2018) Double deletion of tetraspanins CD9 and CD81 in mice leads to a syndrome resembling accelerated aging. [Sci Rep. 8 \(1\): 5145.](#)
13. Sosa, L.J. *et al.* (2013) Amyloid precursor protein is an autonomous growth cone adhesion molecule engaged in contact guidance. [PLoS One. 8 \(5\): e64521.](#)

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**Storage**

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

This product should be stored undiluted.

Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light.

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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**Acknowledgements**

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**Health And Safety Information**

Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1846A647>  
10041

## Related Products

### Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

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**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto: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](mailto: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](mailto:antibody_sales_de@bio-rad.com)

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