

## Datasheet: MCA1846GA

<b>Description:</b>	HAMSTER ANTI MOUSE CD81
<b>Specificity:</b>	CD81
<b>Other names:</b>	TAPA-1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	Eat2
<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	▪			1/10 - 1/50
Immunohistology - Frozen (1)	▪			
Immunohistology - Paraffin		▪		
ELISA	▪			
Immunoprecipitation	▪			
Western Blotting (2)	▪			

Where this antibody 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 antibody for use in their own system using appropriate negative/positive controls.

**(1)The epitope recognised by this antibody is reported to be sensitive to formaldehyde fixation and tissue processing. Bio-Rad recommends the use of acetone fixation for frozen sections.**

**(2)Clone Eat2 recognizes mouse CD81 under non-reducing conditions.**

<b>Target Species</b>	Mouse
<b>Species Cross Reactivity</b>	Reacts with: Rat <b>N.B.</b> Antibody reactivity and working conditions may vary between species.
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G 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 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>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>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<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> <li>Takeda, Y. <i>et al.</i> (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. <a href="#">J Biol Chem. 283: 26089-97.</a></li> <li>Suzuki, M. <i>et al.</i> (2009) Tetraspanin CD9 negatively regulates lipopolysaccharide-induced macrophage activation and lung inflammation. <a href="#">J Immunol. 182: 6485-93.</a></li> <li>Ha, C.T. <i>et al.</i> (2005) Binding of pregnancy-specific glycoprotein 17 to CD9 on macrophages induces secretion of IL-10, IL-6, PGE2, and TGF-beta1. <a href="#">J Leukoc Biol. 77: 948-57.</a></li> <li>Pan, Q. <i>et al.</i> (2011) Hepatic cell-to-cell transmission of small silencing RNA can extend the therapeutic reach of RNA interference (RNAi). <a href="#">Gut. 61: 1330-9.</a></li> <li>Jin, Y. <i>et al.</i> (2013) Statins decrease lung inflammation in mice by upregulating tetraspanin CD9 in macrophages. <a href="#">PLoS One. 8: e73706.</a></li> <li>Royo, F. <i>et al.</i> (2013) Transcriptome of extracellular vesicles released by hepatocytes. <a href="#">PLoS</a></li> </ol>

[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.](#)

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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. 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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**Shelf Life**

18 months from date of despatch.

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**Health And Safety Information**

Material Safety Datasheet documentation #10040 available at:  
10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Hamster IgG (STAR104...) [DyLight®549](#), [DyLight®649](#), [DyLight®800](#),  
[FITC](#)

Goat Anti Hamster IgG (STAR79...) [Biotin](#), [FITC](#), [HRP](#)

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'M315410:180503'

**Printed on 20 Jun 2018**