

## Datasheet: MCA1846F

<b>Description:</b>	HAMSTER ANTI MOUSE CD81:FITC
<b>Specificity:</b>	CD81
<b>Other names:</b>	TAPA-1
<b>Format:</b>	FITC
<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	■			

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

Mouse

### Species Cross Reactivity

Reacts with: Rat

**N.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 Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

### Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

### Preparation

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

### Buffer Solution

Phosphate buffered saline

<b>Preservative</b>	0.09% sodium azide (NaN <sub>3</sub> )
<b>Stabilisers</b>	1% bovine serum albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.1 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>RRID</b>	AB_323466
<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 10µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl. The Fc region of monoclonal antibodies may bind to cells expressing low affinity fc receptors. This may be reduced by using SeroBlock FcR ( <a href="#">BUF041A/BUF041B</a> ).
<b>References</b>	<ol style="list-style-type: none"> <li>1. 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>2. 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. <a href="#">Cancer Res. 61: 5248-54.</a></li> <li>3. 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>4. 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:</a></li> </ol>

[948-57.](#)

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.](#)
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9. 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.](#)
10. 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.](#)
11. Royo, F. *et al.* (2013) Transcriptome of extracellular vesicles released by hepatocytes. [PLoS One. 8: e68693.](#)
12. Jin, Y. *et al.* (2013) Statins decrease lung inflammation in mice by upregulating tetraspanin CD9 in macrophages. [PLoS One. 8: e73706.](#)
13. 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.](#)
14. Royo, F. *et al.* (2024) Three-Dimensional Hepatocyte Spheroids: Model for Assessing Chemotherapy in Hepatocellular Carcinoma [Biomedicines. 12 \(6\): 1200.](#)

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**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. This product is photosensitive and should be protected from light.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1846F>  
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**Regulatory** For research purposes only

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## Related Products

### Recommended Useful Reagents

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

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

**North & South America** Tel: +1 800 265 7376  
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