

## Datasheet: MCA1846A488

<b>Description:</b>	HAMSTER ANTI MOUSE CD81:Alexa Fluor® 488
<b>Specificity:</b>	CD81
<b>Other names:</b>	TAPA-1
<b>Format:</b>	ALEXA FLUOR® 488
<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 - 1/2

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 Alexa Fluor® 488 - liquid

### Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Alexa Fluor®488	495	519

### 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 (NaN <sub>3</sub> ) 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_322460
<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 10µl of the suggested working dilution to label 10<sup>6</sup> cells in 100µl.</p> <p>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</a>/<a href="#">BUF041B</a>).</p>
<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>

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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.](#)

<b>Storage</b>	<p>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.</p> <p>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.</p>
<b>Guarantee</b>	12 months from date of despatch
<b>Acknowledgements</b>	<p>This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or <a href="mailto:outlicensing@thermofisher.com">outlicensing@thermofisher.com</a></p>
<b>Health And Safety Information</b>	<p>Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1846A488">https://www.bio-rad-antibodies.com/SDS/MCA1846A488</a></p> <p>10041</p>

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## Related Products

### Recommended Useful Reagents

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

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

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

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

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