

Datasheet: MCA1846PET

Description:	HAMSTER ANTI MOUSE CD81:RPE
Specificity:	CD81
Other names:	TAPA-1
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	Eat2
Isotype:	IgG1
Quantity:	25 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 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.

Target Species	Mouse								
Species Cross Reactivity	Reacts with: Rat N.B. Antibody reactivity and working conditions may vary between species.								
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized								
Reconstitution	Reconstitute in 0.25 ml distilled water								
Max Ex/Em	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>RPE 488nm laser</td> <td>496</td> <td>578</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	RPE 488nm laser	496	578		
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	0.09% Sodium Azide								
Stabilisers	1% Bovine Serum Albumin 5% Sucrose								
Immunogen	38C13, murine B cell line.								

**External Database
Links**

UniProt:

[P35762](#) [Related reagents](#)

Entrez Gene:

[12520](#) Cd81 [Related reagents](#)

Synonyms

Tapa1

Fusion Partners

Spleen cells from immunised Armenian hamsters were fused with cells of the mouse PX3-Ag.8.653 myeloma cell line.

Specificity

Hamster anti Mouse CD81 antibody, clone Eat2 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 ([UniProt: P35762](#)). 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 ([Maecker *et al.* 2000](#)). Eat 2 requires the presence of both extracellular loops of TAPA-1 for binding.

Mice lacking CD81 demonstrate reduced fertility through impaired oocyte-sperm fusion, double knockout CD81^{-/-} CD9^{-/-} mice are completely infertile suggesting complimentary roles in oocyte-sperm fusion ([Rubenstein *et al.* 2006](#)).

Flow Cytometry

Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul.

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 ([BUF041A/B](#)).

References

1. Clark, K.L. *et al.* (2001) PGRL is a major CD81-associated protein on lymphocytes and distinguishes a new family of cell surface proteins. [J Immunol. 167 \(9\): 5115-21.](#)
2. Maecker, H.T. *et al.* (2000) Differential expression of murine CD81 highlighted by new anti-mouse CD81 monoclonal antibodies. [Hybridoma 19: 15-22.](#)
3. Conde-Vancells, J. *et al.* (2010) Candidate biomarkers in exosome-like vesicles purified from rat and mouse urine samples. [Proteomics Clin Appl. 4 \(4\): 416-25.](#)
4. Conde-Vancells, J. *et al.* (2008) Characterization and comprehensive proteome profiling of exosomes secreted by hepatocytes. [J Proteome Res. 7: 5157-66.](#)
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.](#)

Storage

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.

Shelf Life

12 months from date of reconstitution.

Health And Safety Information

Material Safety Datasheet documentation #10075 available at:
10075: <https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf>

Regulatory

For research purposes only

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