

Datasheet: MCA1846PE

BATCH NUMBER 151852

Description:	HAMSTER ANTI MOUSE CD81:RPE
Specificity:	CD81
Other names:	TAPA-1
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	Eat2
Isotype:	IgG1
Quantity:	100 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. 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 R. Phycoerythrin (RPE) - lyophilized

Reconstitution

Reconstitute with 1.0 ml distilled water

Max Ex/Em

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

RRID AB_323628

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.](#)
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.](#)

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.

Guarantee

12 months from date of despatch

Health And Safety Information

Material Safety Datasheet documentation #20487 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1846PE>
20487

Regulatory

For research purposes only

Related Products

Recommended Useful Reagents

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

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

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'M375371:210104'

Printed on 18 Jan 2024
