Datasheet: MCA1846A647

Description:	HAMSTER ANTI MOUSE CD81:Alexa Fluor® 647
Specificity:	CD81
Other names:	TAPA-1
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	Eat2
Isotype:	IgG1
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

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® 647 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Alexa Fluor®647	650	665

Preparation

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

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers	0.09% sodium azide (NaN_3) 1% bovine serum albumin
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml
Immunogen	38C13, murine B cell line.
External Database Links	**UniProt:** P35762 Related reagents **Entrez Gene:** 12520 Cd81 Related reagents
Synonyms	Tapa1
RRID	AB_322479
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 10µl of the suggested working dilution to label 10^6 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 (BUF041A/BUF041B).
References	1. Maecker, H.T. *et al*. (2000) Differential expression of murine CD81 highlighted by new anti-mouse CD81 monoclonal antibodies. Hybridoma 19: 15-22. 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. Cancer Res. 61: 5248-54. 3. 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. 4. 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.
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. Conde-Vancells, J. *et al.* (2008) Characterization and comprehensive proteome profiling of exosomes secreted by hepatocytes. J Proteome Res. 7: 5157-66.
7. Suzuki, M. *et al.* (2009) Tetraspanin CD9 negatively regulates lipopolysaccharide-induced macrophage activation and lung inflammation. J Immunol. 182: 6485-93.
8. 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.
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.

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.

Guarantee

12 months from date of despatch

Acknowledgements

Health And Safety Information

Material Safety Datasheet documentation #10041 available at:
https://www.bio-rad-antibodies.com/SDS/MCA1846A647
10041

Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

MOUSE SEROBLOCK FcR (BUF041A)
MOUSE SEROBLOCK FcR (BUF041B)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	**Worldwide**	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	**Europe**	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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