Datasheet: MCA1846A647T

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:	25 TESTS/0.25ml

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. 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 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
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_2244563
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 10^6 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/C).
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 +4ºC or at -20ºC if preferred. This product should be stored undiluted. Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	12 months from date of despatch
Acknowledgements	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 outlicensing@thermofisher.com
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Regulatory	For research purposes only

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