Datasheet: MCA1846

Description:	HAMSTER ANTI MOUSE CD81
Specificity:	CD81
Other names:	TAPA-1
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	Eat2
Isotype:	IgG1
Quantity:	0.25 mg

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	▪			1/50 - 1/100
Immunohistology - Frozen (1)	▪			
Immunohistology - Paraffin		▪		
ELISA	▪			
Immunoprecipitation	▪			
Western Blotting (2)	▪			

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.

(1)**The epitope recognised by this antibody is reported to be sensitive to formaldehyde fixation and tissue processing. Bio-Rad recommends the use of acetone fixation for frozen sections.**

(2)**Clone Eat2 recognizes mouse CD81 under non-reducing conditions.**

Target Species	Mouse
Species Cross Reactivity	Reacts with: Rat **N.B.** Antibody reactivity and working conditions may vary between species.
Product Form	Purified IgG - liquid
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

Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
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 10^6 cells in 100ul.
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 or at -20°C if preferred. This product should be stored undiluted. Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Hamster IgG (STAR104...)	DyLight®549, DyLight®649, DyLight®800, FITC
Goat Anti Hamster IgG (STAR79...)	Biotin, FITC, HRP

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