

Datasheet: MCA2184PE

Description:	MOUSE ANTI HUMAN CD3:RPE
Specificity:	CD3
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	MEM-57
Isotype:	IgG2a
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 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

Human

Species Cross Reactivity

Reacts with: Chimpanzee

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 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 (NaN ₃)
Stabilisers	1% bovine serum albumin
External Database Links	<p>UniProt:</p> <p>P04234 Related reagents</p> <p>P07766 Related reagents</p> <p>P09693 Related reagents</p> <p>Entrez Gene:</p> <p>915 CD3D Related reagents</p> <p>916 CD3E Related reagents</p> <p>917 CD3G Related reagents</p>
Synonyms	T3D, T3E, T3G
RRID	AB_566703
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the P3/NS1/1-Ag4-1 mouse myeloma cell line.
Specificity	<p>Mouse anti Human CD3 (MEM-57) is a monoclonal antibody recognizing an extracellular epitope of the human CD3 complex containing either δ-ε or γ-ε subunit complexes (Dave et al. 1997). Mouse anti Human CD3 (MEM-57) recognizes a conformational CD3 epitope minimally requiring the presence of the CD3ε subunit extracellular domain (Transy et al. 1989) as it will recognize murine 3D054.8 hybridoma cells transfected with cDNA to express the human CDε subunit lacking its cytoplasmic domain. CD3 serves as a pan T cell marker, it is expressed on the surface of over 95% of circulating human peripheral T cells. CD3 is also present on ~60-80% of thymocytes and on Purkinji cells, neurons present in the cerebellar cortex. CD3 is not expressed on B cells or NK cells.</p> <p>The TCR complex consists of TCR heterodimers, either α/β or γ/δ expressed in a mutually exclusive manner, analagous that seen in mice on different T cell lineages. In order for the TCR heterodimer to be expressed on the cell surface it must associate with a minimal CD3 complex. The CD3 complex itself is made up of four subunits, γ, δ, ε and ζ responsible for effective signalling upon TCR activation, via a single or multiple, depending on the subunit, immunoreceptor tyrosine-based activation motif (ITAM) present in the CD3 subunit cytoplasmic domain (Kuhns et al. 2006, Dave et al. 1997a, Dave et al. 1997b).</p> <p>Mouse anti Human CD3 clone MEM-57 demonstrates a mitogenic effect on peripheral blood T cells and on the lymphoblastoid Jurkat cell line (Batista et al. 2004 Brdicková et al. 2003). Clone MEM-57 immunoprecipitates proteins of ~22 kDa and more weakly ~28 kDa. from peripheral blood T cell lysates.</p>
Flow Cytometry	Use 10µl of the suggested working dilution to label 10 ⁶ cells in 100µl or 100µl whole blood

References

1. Horejsí, V. *et al.* (1988) Monoclonal antibodies against human leucocyte antigens. II. Antibodies against CD45 (T200), CD3 (T3), CD43, CD10 (CALLA), transferrin receptor (T9), a novel broadly expressed 18-kDa antigen (MEM-43) and a novel antigen of restricted expression (MEM-74). [Folia Biol \(Praha\). 34 \(1\): 23-34.](#)
2. Transy, C. *et al.* (1989) Most anti-human CD3 monoclonal antibodies are directed to the CD3 epsilon subunit. [Eur J Immunol. 19: 947-50.](#)
3. Amlot, P.L. *et al.* (1996) Activation antigen expression on human T cells. I. Analysis by two-colour flow cytometry of umbilical cord blood, adult blood and lymphoid tissue. [Clin Exp Immunol. 105: 176-82.](#)
4. Dave, V.P. *et al.* (1998) Altered functional responsiveness of thymocyte subsets from CD3delta-deficient mice to TCR-CD3 engagement. [Int Immunol. 10: 1481-90.](#)
5. Morris, R.J. *et al.* (2005) A high-efficiency system of natural killer cell cloning. [J Immunol Methods. 307: 24-33.](#)
6. Gunnlaugsdottir, B. *et al.* (2008) Naive human T-cells become non-responsive towards anti-TNFalpha (infliximab) treatment in vitro if co-stimulated through CD28. [Scand J Immunol. 68: 624-34.](#)
7. Bughani U *et al.* (2017) T cell activation and differentiation is modulated by a CD6 domain 1 antibody Itolizumab. [PLoS One. 12 \(7\): e0180088.](#)

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/MCA2184PE>
20487

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:RPE \(MCA929PE\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

North & South Tel: +1 800 265 7376

America 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](https://www.bio-rad-antibodies.com/datasheets)

'M419321:230616'

