Datasheet: MCA1724PET

Description:	MOUSE ANTI HUMAN CD152:RPE
Specificity:	CD152
Other names:	CTLA-4
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	BNI3
Isotype:	IgG2a
Quantity:	25 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 (1)	▪			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.

(1) **Membrane permeabilisation is required for this application. Bio-Rad recommends the use of Leucoperm™ (Product Code BUF09) for this purpose.**

Target Species

Human

Product Form

Purified IgG conjugated to R. Phycoerythrin (RPE) - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
RPE 488nm laser	496	578

Preparation

Purified IgG prepared by affinity chromatography on Protein A from ascites

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide
0.2% Bovine Serum Albumin

Immunogen

Human CTLA-4/human IgG heavy chain fusion protein.

External Database Links

UniProt:
P16410 Related reagents

Entrez Gene:

1493 CTLA4 Related reagents

Synonyms	CD152
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse P3/X63-Ag8.653 myeloma cell line.
Specificity	**Mouse anti Human CD152 antibody, clone BNI3** recognizes human CD152, also known as CTLA-4 (cytotoxic T-lymphocyte-associated antigen 4), an inhibitory receptor and negative regulator of T-cell responses. CD152 is a single pass type 1 transmembrane protein belonging to the immunoglobulin superfamily containing a single Ig-v-like domain in the extracellular region. CD152 along with CD28 binds to the co-stimulatory molecules CD80 and CD86 (Azuma *et al.* 1993). Mouse anti human CD152 antibody, clone BNI3 is able to block ligand binding on the Raji B-cell line (Steiner *et al.* 2001) and blocks binding of an alternative clone, BNI8 to CTLA-4/Ig in ELISA. Mouse anti Human CD152 antibody, clone BNI3 binds to the same epitope as classified anti CTLA-4 clones 11D4 and 10A8 (Wang *et al.* In: Leukocyte typing VI 1997 Garland Publishing Inc. pp97-98, Bull World Health Organ. 1997). The cytoplasmic domain of CD152 contains a critical tyrosine at residue 201 phosphorylated by Janus Kinase 2 which subsequently controls surface expression through regulation of CD152 interaction with AP-2 (Shiratori *et al.* 1997, Chikuma *et al.* 2000). CD152 is expressed primarily as an intracellular antigen with transport to the cell surface under tight regulation of several molecules including Trim, PLD and TIRC7, CD152 also demonstrates rapid internalization once expressed at the cell surface (Valk *et al.* 2008). CD152 plays a significant role in maintaining tolerance to self antigens and defects in CD152 presentation and expression has been implicated in a number of autoimmune diseases (Romo-Tena *et al.* 2013).
Flow Cytometry	Use 20ul of the suggested working dilution to label $5x10^5$ cells in 100ul.
References	1. Linsley, P.S. *et al.* (1992) Coexpression and functional cooperation of CTLA-4 and CD28 on activated T lymphocytes. J Exp Med. 176 (6): 1595-604. 2. Kuiper, H.M. *et al.* (1995) Activated T cells can induce high levels of CTLA-4 expression on B cells. J Immunol. 155 (4): 1776-83. 3. Castan, J. *et al.* (1997) Accumulation of CTLA-4 expressing T lymphocytes in the germinal centres of human lymphoid tissues. Immunology. 90 (2): 265-71. 4. Lee, C.C. *et al.* (2009) The regulatory function of umbilical cord blood CD4(+) CD25(+) T cells stimulated with anti-CD3/anti-CD28 and exogenous interleukin (IL)-2 or IL-15. Pediatr Allergy Immunol. 20 (7): 624-32. 5. Pistillo, M.P. *et al.* (2003) CTLA-4 is not restricted to the lymphoid cell lineage and can function as a target molecule for apoptosis induction of leukemic cells. Blood. 101: 202-9. 6. Tan, P.H. *et al.* (2005) Creation of tolerogenic human dendritic cells via intracellular CTLA4: a novel strategy with potential in clinical immunosuppression. Blood. 106: 2936-43. 7. Steiner, K. *et al.* (2001) Increased expression of CTLA-4 (CD152) by T and B lymphocytes in Wegener's granulomatosis. Clin Exp Immunol. 126: 143-50. 8. Lu, C.H. *et al.* (2016) DNA Methyltransferase Inhibitor Promotes Human $CD4^+CD25^hFOXP3^+$ Regulatory T Lymphocyte Induction under Suboptimal TCR Stimulation. Front Immunol. 7: 488. 9. Steiner, K. *et al.* (1999) Enhanced expression of CTLA-4 (CD152) on CD4+ T cells in HIV infection. Clin Exp Immunol. 115 (3): 451-7. 10. Ward, F.J. *et al.* (2013) The soluble isoform of CTLA-4 as a regulator of T-cell responses. Eur J

	Immunol. 43 (5): 1274-85.
Further Reading	1. Chin, L.T. *et al.* (2008) Immune intervention with monoclonal antibodies targeting CD152 (CTLA-4) for autoimmune and malignant diseases. Chang Gung Med J. 31: 1-15.
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.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: 10041: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
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 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

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Printed on 21 Jun 2018