Datasheet: MCA1477T

Description:	RAT ANTI HUMAN CD3
Specificity:	CD3
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	CD3-12
Isotype:	IgG1
Quantity:	25 µg

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)	▪			1/50 - 1/100
Immunohistology - Frozen	▪			1/100
Immunohistology - Paraffin (2)	▪			1/100
Immunofluorescence	▪			

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.

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

(2)**This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Tris/EDTA buffer pH 9.0 is recommended for this purpose.**

Target Species	Human
Species Cross Reactivity	Reacts with: Bovine, Dog, Horse, Rhesus Monkey, Pig, Chicken, Mouse, Duck, Koala, Harbour Porpoise, Alpaca, Cynomolgus monkey, Spotted Hyena, Sea Lion, Cat, Amazon Parrot, Raccoon, Great horned owl (Bubo virginianus), Bullfrog, Xenopus, Rabbit Based on sequence similarity, is expected to react with:Mammals, Birds, Amphibia **N.B.** Antibody reactivity and working conditions may vary between species.
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared 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	Synthetic peptide sequence derived from cytoplasmic epitope of CD3 (Glu-Arg-Pro-Pro-Pro-Val-Pro-Asn-Pro-Asp-Tyr-Glu-Pro-Cys) (ERPPPVPNPDYEPC)
External Database Links	**UniProt:** P07766 Related reagents **Entrez Gene:** 916 CD3E Related reagents
Synonyms	T3E
Specificity	**Rat anti Human CD3, clone CD3-12** raised against a peptide representing an invariant cytoplasmic sequence within the CD3ε chain recognizes human CD3ε. CD3 is a multimeric protein complex composed of four distinct polypeptide chains (ε, γ, δ, ζ) that assemble and function as three pairs of dimers (εγ, εδ, ζζ). The CD3 complex serves as a T cell co-receptor that associates non-covalently with the T cell receptor (TCR) (Malissen 2008; Guy and Vignali 2009; Smith-Garvin *et al.* 2009). CD3 is a defining feature of cells belonging to the T cell lineage and can therefore be used as T cell marker. As Rat anti Human CD3, clone CD3-12 has been specifically raised against an epitope within the epsilon peptide chain, highly conserved among species clone CD3-12 has a very broad species crossreactivity for the CD3 marker. (Jones *et al.* 1993; Kothlow *et al.* 2005).
Histology Positive Control Tissue	Tonsil
References	1. Jones, M. *et al.* (1993) Detection of T and B cells in many animal species using cross-reactive anti-peptide antibodies. J Immunol. 150 (12): 5429-35. 2. Shulga-Morskaya, S. *et al.* (2004) B cell-activating factor belonging to the TNF family acts through separate receptors to support B cell survival and T cell-independent antibody formation. J Immunol. 173 (4): 2331-41. 3. Kapturczak, M.H. *et al.* (2004) Heme oxygenase-1 modulates early inflammatory responses: evidence from the heme oxygenase-1-deficient mouse. Am J Pathol. 165 (3): 1045-53. 4. Kothlow, S. *et al.* (2005) Characterization of duck leucocytes by monoclonal antibodies. Dev Comp Immunol. 29 (8): 733-48. 5. Patole, P.S. *et al.* (2006) Expression and regulation of Toll-like receptors in lupus-like immune complex glomerulonephritis of MRL-Fas(lpr) mice. Nephrol Dial Transplant 21 (11): 3062-73. 6. Foryst-Ludwig, A. *et al.* (2010) PPARgamma activation attenuates T-lymphocyte-dependent inflammation of adipose tissue and development of insulin resistance in obese mice. Cardiovasc Diabetol. 9: 64. 7. Osorio, Y. *et al.* (2011) Identification of small molecule lead compounds for visceral leishmaniasis using a novel *ex vivo* splenic explant model system. PLoS Negl Trop Dis. 5:e962. 8. Flatz, L. *et al* (2011) T cell-dependence of Lassa fever pathogenesis. PLoS Pathog. 6: e1000836. 9. Gendronneau, G. *et al.* (2010) Influence of Hoxa5 on p53 tumorigenic outcome in mice. Am J Pathol. 176: 995-1005. 10. Herrmann, I. *et al.* (2006) *Streptococcus pneumoniae* Infection aggravates experimental autoimmune encephalomyelitis via Toll-like receptor 2. Infect Immun. 74: 4841-8. 11. Ruf, M.T. *et al.* (2012) Chemotherapy-Associated Changes of Histopathological Features of

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Further Reading

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Storage

Store at +4ºC or at -20ºC 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

Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP

Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®549, DyLight®649, DyLight®800
Goat Anti Rat IgG (STAR131...)	Alk. Phos., Biotin
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP

Recommended Negative Controls

RAT IgG1 NEGATIVE CONTROL (MCA6004GA)

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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