Datasheet: MCA715G

BATCH NUMBER 161758

Description:	RAT ANTI HUMAN CD59
Specificity:	CD59
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	YTH53.1
Isotype:	IgG2b
Quantity:	0.2 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	▪			
Immunohistology - Paraffin (1)	▪			1/5 - 1/10
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting	▪			
Immunofluorescence	▪			
Functional Assays (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) **This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.**
(2) **This product contains sodium azide, removal by dialysis is recommended prior to use in functional assays.**

Target Species	Human
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	Human Peripheral Blood T cells.
External Database Links	**UniProt:** P13987 Related reagents **Entrez Gene:** 966 CD59 Related reagents
Synonyms	MIC11, MIN1, MIN2, MIN3, MSK21
RRID	AB_566852
Fusion Partners	Spleen cells from an immunised DA rat were fused with cells of the Y3/Ag1.2.3 rat myeloma cell line.
Specificity	**Rat anti Human CD59 antibody, clone YTH53.1** recognizes the human CD59 cell surface antigen, also known as MAC-inhibitory protein, 1F5 antigen, 20 kDa homologous restriction factor, MEM43 antigen, membrane attack complex inhibition factor, membrane inhibitor of reactive lysis or protectin. CD59 is produced as a 103 amino acid proprotein, further processed to produce an 18-20 kDa GPI linked glycoprotein broadly expressed by human leucocytes and erythrocytes. Mutation of the CD59 gene can result in the presentation of Hemolytic anemia, CD59-mediated, with or without polyneuropathy (HACD59) a disease characterized by infantile onset of a relapsing-remitting polyneuropathy manifest as limb muscle weakness, and hyporeflexia. Rat anti Human CD59 antibody, clone YTH53.1 blocks the normal function of CD59 (Walsh *et al.* 1991).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
Histology Positive Control Tissue	Placenta
References	1. Walsh, L.A. *et al.* (1991) Transfection of human CD59 complementary DNA into rat

cells confers resistance to human complement. Eur J Immunol. 21 (3): 847-50.
2. Davies, A. *et al.* (1995) Identification of MIC 11 antigen as an epitope of the CD59 molecule. Immunology. 85 (2): 220-7.
3. Hosokawa, M. *et al.* (2004) Human oligodendroglial cells express low levels of C1 inhibitor and membrane cofactor protein mRNAs. J Neuroinflammation. 1: 17.
4. Ajona, D. *et al.* (2007) Down-regulation of human complement factor H sensitizes non-small cell lung cancer cells to complement attack and reduces *in vivo* tumor growth. J Immunol. 178 (9): 5991-8.
5. Ellison BS *et al.* (2007) Complement susceptibility in glutamine deprived breast cancer cells. Cell Div. 2: 20.
6. Koch, N. *et al.* (2009) IL-10 protects monocytes and macrophages from complement-mediated lysis. J Leukoc Biol. 86: 155-66.
7. Yang, P. *et al.* (2009) Expression and modulation of RPE cell membrane complement regulatory proteins. Invest Ophthalmol Vis Sci. 50: 3473-81.
8. Zhu, C. *et al.* (2020) Isatuximab Acts Through Fc-Dependent, Independent, and Direct Pathways to Kill Multiple Myeloma Cells. Front Immunol. 11: 1771.

Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA715G 10040
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR73...)	RPE
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®550, DyLight®650, DyLight®800
Rabbit Anti Rat IgG (STAR21...)	HRP
Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Goat Anti Rat IgG (STAR131...)	Alk. Phos., Biotin
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP

Recommended Negative Controls

RAT IgG2b NEGATIVE CONTROL (MCA6006GA)

North & South America Tel: +1 800 265 7376
Fax: +1 919 878 3751
Email: antibody_sales_us@bio-rad.com

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Europe Tel: +49 (0) 89 8090 95 21
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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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