

Datasheet: MCA715GT

Description:	RAT ANTI HUMAN CD59
Specificity:	CD59
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	YTH53.1
Isotype:	IgG2b
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	▪			1/50 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin (1)	▪			1/5 - 1/10
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting	▪			
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	<p>UniProt: P13987 Related reagents</p> <p>Entrez Gene: 966 CD59 Related reagents</p>
Synonyms	MIC11, MIN1, MIN2, MIN3, MSK21
RRID	AB_1102221
Fusion Partners	Spleen cells from an immunised DA rat were fused with cells of the Y3/Ag1.2.3 rat myeloma cell line.
Specificity	<p>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.</p> <p>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.</p> <p>Rat anti Human CD59 antibody, clone YTH53.1 blocks the normal function of CD59 (Walsh et al. 1991).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
Histology Positive Control Tissue	Placenta
References	<ol style="list-style-type: none"> Walsh, L.A. <i>et al.</i> (1991) Transfection of human CD59 complementary DNA into rat cells confers resistance to human complement. Eur J Immunol. 21 (3): 847-50. Davies, A. <i>et al.</i> (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.
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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
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Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA715GT 10040
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Regulatory	For research purposes only
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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 \(MCA6006GA\)](#)

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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
'M383254:210513'

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