

# Datasheet: MCA715G

**BATCH NUMBER 154020**

<b>Description:</b>	RAT ANTI HUMAN CD59
<b>Specificity:</b>	CD59
<b>Other names:</b>	HRF, PROTECTIN
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	YTH53.1
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	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](http://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. Bio-Rad recommend the use of [EQU003](#) for this purpose.**

<b>Target Species</b>	Human
-----------------------	-------

<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Human Peripheral Blood T cells.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P13987</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">966</a>    CD59    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	MIC11, MIN1, MIN2, MIN3, MSK21
<b>RRID</b>	AB_566852
<b>Fusion Partners</b>	Spleen cells from an immunised DA rat were fused with cells of the Y3/Ag1.2.3 rat myeloma cell line.
<b>Specificity</b>	<p><b>Rat anti Human CD59 antibody, clone YTH53.1</b> 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 (<a href="#">HACD59</a>) 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 (<a href="#">Walsh et al. 1991</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>Histology Positive</b>	Placenta

## References

1. Davies, A. *et al.* (1989) CD59, an LY-6-like protein expressed in human lymphoid cells, regulates the action of the complement membrane attack complex on homologous cells. [J Exp Med. 170 \(3\): 637-54.](#)
2. 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.](#)
3. Davies, A. *et al.* (1995) Identification of MIC 11 antigen as an epitope of the CD59 molecule. [Immunology. 85 \(2\): 220-7.](#)
4. Ellison BS *et al.* (2007) Complement susceptibility in glutamine deprived breast cancer cells. [Cell Div. 2: 20.](#)
5. 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.](#)
6. Yang, P. *et al.* (2009) Expression and modulation of RPE cell membrane complement regulatory proteins. [Invest Ophthalmol Vis Sci. 50: 3473-81.](#)
7. Hosokawa, M. *et al.* (2004) Human oligodendroglial cells express low levels of C1 inhibitor and membrane cofactor protein mRNAs. [J Neuroinflammation. 1: 17.](#)
8. Koch, N. *et al.* (2009) IL-10 protects monocytes and macrophages from complement-mediated lysis. [J Leukoc Biol. 86: 155-66.](#)

## Storage

Store at +4°C or at -20°C 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.

## 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

Rabbit Anti Rat IgG (STAR16...)	<a href="#">DyLight®800</a>
Rabbit Anti Rat IgG (STAR17...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR72...)	<a href="#">HRP</a>
Goat Anti Rat IgG (STAR69...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR73...)	<a href="#">RPE</a>
Rabbit Anti Rat IgG (STAR21...)	<a href="#">HRP</a>
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	<a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®800</a>

Goat Anti Rat IgG (STAR131...)

[Alk. Phos.](#), [Biotin](#)

## Recommended Negative Controls

[RAT IgG2b NEGATIVE CONTROL \(MCA6006GA\)](#)

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto: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](mailto: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](mailto: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://bio-rad-antibodies.com/datasheets)

'M368826:200529'

**Printed on 18 Jan 2024**

---

© 2024 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)