

## Datasheet: HCA312

<b>Description:</b>	HUMAN ANTI ECULIZUMAB
<b>Specificity:</b>	ECULIZUMAB
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	AbD32311
<b>Isotype:</b>	HuCAL Fab monovalent
<b>Quantity:</b>	0.1 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
ELISA	▪			

Where this product 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 product for use in their own system using appropriate negative/positive controls.

<b>Product Form</b>	A monovalent human recombinant Fab (kappa light chain) selected from the HuCAL phage display library, expressed in <i>E. coli</i> . The antibody is tagged with a DYKDDDDK tag and a HIS-tag (HHHHHH). This antibody is supplied as a liquid.
<b>Preparation</b>	Metal chelate affinity chromatography
<b>Source</b>	<i>E.coli</i>
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.01% Thiomersal
<b>Approx. Protein Concentrations</b>	Antibody concentration 0.5 mg/ml
<b>Immunogen</b>	Eculizumab
<b>Specificity</b>	<b>Human Anti-Eculizumab Antibody, clone AbD32311</b> is a paratope specific, inhibitory

anti-idiotypic antibody that specifically recognizes the free humanized monoclonal antibody eculizumab. It does not recognize free human complement C5 or eculizumab in complex with C5. The antibody can be used to measure free eculizumab or eculizumab biosimilars in patient samples.

A pair of anti-eculizumab antibodies can be used to develop a pharmacokinetic (PK) bridging assay to measure free drug. This antibody, in monovalent Fab format, is recommended as the capture antibody, paired with an HRP conjugated Anti-Eculizumab Antibody in full immunoglobulin format, clone AbD32107\_hIgG1 ([HCA313P](#)) as the detection antibody.

Eculizumab (Soliris) is a humanized IgG2/4 kappa antibody. The heavy chains are comprised of human IgG2 sequences in CH1, the hinge and the adjacent portion CH2, and human IgG4 sequences in the remaining part of CH2 and CH3. The drug is used to treat paroxysmal nocturnal hemoglobinuria (PNH), a rare acquired life-threatening disease of the blood characterized by destruction of red blood cells by the complement system. It also has approval as an orphan drug for treatment of atypical hemolytic uremic syndrome (aHUS). Eculizumab specifically binds to the terminal complement component 5 (C5) and inhibits the cleavage of C5 to C5a and C5b by the C5 convertase, which prevents the generation of the terminal complement complex C5b-9. Both C5a and C5b-9 cause the terminal complement-mediated events that are characteristic of PNH and aHUS. A 1:1 molar ratio of eculizumab to C5 is sufficient for C5 inhibition.

[View a summary of all anti-eculizumab antibodies](#)

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**Affinity**

The intrinsic affinity of the monovalent form Human anti Eculizumab antibody, clone AbD32311 is  $K_D = 6$  nM as measured by real time, label free molecular interaction analysis on immobilized Eculizumab.

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**ELISA**

Human anti Eculizumab antibody, clone AbD32311 can be used in an indirect ELISA or as the capture antibody for Eculizumab in a bridging ELISA together with [HCA313P](#) as the detection reagent.

Protocol: [PK bridging ELISA to measure free drug.](#)

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**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.

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**Guarantee**

12 months from date of despatch

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**Acknowledgements**

This product and/or its use is covered by claims of U.S. patents, and/or pending U.S. and non-U.S. patent applications owned by or under license to Bio-Rad Laboratories, Inc. See [bio-rad.com/en-us/trademarks](http://bio-rad.com/en-us/trademarks) for details.

His-tag is a trademark of EMD Biosciences.

Soliris is a trademark of Alexion Pharmaceuticals, Inc.

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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10094 available at: <a href="https://www.bio-rad-antibodies.com/SDS/HCA312">https://www.bio-rad-antibodies.com/SDS/HCA312</a> 10094
<b>Licensed Use</b>	For <i>in vitro</i> research purposes and for commercial applications for the provision of <i>in vitro</i> testing services to support preclinical and clinical drug development. Any re-sale in any form or any other commercial application needs a written agreement with Bio-Rad.
<b>Regulatory</b>	For research purposes only
<b>Technical Advice</b>	Recommended protocols and further information about HuCAL recombinant antibody technology can be found in the <a href="#">HuCAL Antibodies Technical Manual</a> .

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## Related Products

### Recommended Useful Reagents

[HUMAN ANTI ECULIZUMAB \(HCA313\)](#)  
[HUMAN ANTI ECULIZUMAB \(HCA314\)](#)  
[HUMAN ANTI ECULIZUMAB \(HCA315\)](#)  
[HISPEC ASSAY DILUENT \(BUF049A\)](#)  
[LYNX RAPID HRP ANTIBODY CONJUGATION KIT \(LNK002P\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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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](https://bio-rad-antibodies.com/datasheets)  
'M416856:230302'

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