

Datasheet: HCA304

**BATCH NUMBER 159552**

<b>Description:</b>	HUMAN ANTI RANIBIZUMAB (DRUG/TARGET COMPLEX)
<b>Specificity:</b>	RANIBIZUMAB DRUG/TARGET COMPLEX
<b>Other names:</b>	Lucentis
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	AbD29928
<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.

### Product Form

A monovalent human recombinant Fab (kappa light chain) selected from the HuCAL® phage display library, expressed in *E. coli*. The antibody is tagged with a DYKDDDDK tag and a HIS-tag (HHHHHH) at the C-terminus of the antibody heavy chain. This antibody is supplied as a liquid.

### Preparation

Metal chelate affinity chromatography

### Buffer Solution

Phosphate buffered saline

### Preservative Stabilisers

0.01% Thiomersal

### Approx. Protein Concentrations

Antibody concentration 0.5 mg/ml

### Immunogen

Ranibizumab

**Specificity** **Human Anti-Ranibizumab Antibody, clone AbD29928** specifically recognizes the Fab fragment antibody drug ranibizumab when in complex with its target, human vascular endothelial growth factor A (VEGF-A). The antibody does not recognize free ranibizumab or unbound recombinant human VEGF-A. It can be used to measure levels of ranibizumab and biosimilars in patient samples.

Clone AbD29928 is a monovalent Fab format antibody that can be used to develop a pharmacokinetic (PK) antigen capture assay to measure free ranibizumab captured via immobilized VEGF-A.

This antibody also recognizes bevacizumab when in complex with human VEGF-A.

Ranibizumab (Lucentis) is a humanized Fab fragment antibody (VH3-23/kappa1), originating from the same parental mouse antibody as bevacizumab (Avastin); it has 4 amino acid exchanges in the heavy chain and 1 amino acid exchange in the light chain compared to bevacizumab. Ranibizumab was first approved to treat wet age-related macular degeneration (AMD), a common form of age-related vision loss. It is also approved for the treatment of macular edema following retinal vein occlusion, diabetic macular edema, and diabetic retinopathy. Ranibizumab inhibits angiogenesis by binding to VEGF-A, blocking its interaction with VEGF receptors on the surface of endothelial cells, and thus preventing the subsequent growth of new blood vessels.

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

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**Affinity** The monovalent intrinsic affinity of AbD29928 was measured as  $K_D=1$  nM by real time, label-free molecular interaction analysis on immobilized VEGF/ranibizumab complex.

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**ELISA** Clone AbD29928 is recommended for use as the detection reagent in an antigen capture assay to measure free ranibizumab captured via immobilized VEGF

Protocol: [PK antigen capture ELISA to measure free drug](#)

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**References** 1. Harth, S. *et al.* (2019) Generation by phage display and characterization of drug-target complex-specific antibodies for pharmacokinetic analysis of biotherapeutics. [MAbs. 11 \(1\): 178-190.](#)

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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** Sold under license of U.S. Patents 7785859 and 8273688 and corresponding patents. This antibody was developed by Bio-Rad. Lucentis is a trademark of Genentech

His-tag is a trademark of EMD Biosciences.

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**Health And Safety Information** Material Safety Datasheet documentation #10094 available at:  
<https://www.bio-rad-antibodies.com/SDS/HCA304>  
10094

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**Licensed Use** For in vitro research purposes and for commercial applications for the provision of in vitro 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.

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**Regulatory** For research purposes only

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**Technical Advice** Recommended protocols and further information about HuCAL recombinant antibody technology can be found in the [HuCAL Antibodies Technical Manual](#)

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## Related Products

### Recommended Secondary Antibodies

Rat Anti Synthetic Peptide DYKDDDDK TAG (MCA4764...) [HRP](#)

### Recommended Useful Reagents

[HISPEC ASSAY DILUENT \(BUF049A\)](#)

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