

## Datasheet: HCA238

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| <b>Description:</b>  | HUMAN ANTI OMALIZUMAB (DRUG/TARGET COMPLEX) |
| <b>Specificity:</b>  | OMALIZUMAB DRUG/TARGET COMPLEX              |
| <b>Format:</b>       | Purified                                    |
| <b>Product Type:</b> | Monoclonal Antibody                         |
| <b>Clone:</b>        | AbD20760                                    |
| <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.

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| <b>Product Form</b>                   | A monovalent human recombinant Fab 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) at the C-terminus of the antibody heavy chain. 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>       | 0.09% Sodium Azide (NaN <sub>3</sub> )  |
| <b>Approx. Protein Concentrations</b> | IgG concentration 0.5 mg/ml.  |
| <b>Immunogen</b>                      | Omalizumab/IgE complex  |

**Specificity** Omalizumab (brand name Xolair<sup>®</sup>) is a recombinant DNA-derived humanized IgG1 kappa monoclonal antibody used in the treatment of patients with moderate or severe asthma who have demonstrated a positive allergy skin test and whose symptoms are not controlled by inhaled corticosteroids.

Allergic asthma is mediated by IgE released by B cells in response to allergen. Circulating IgE binds to the high-affinity IgE Fc receptor (FcεRI) expressed on basophils and mast cells, triggering the release of histamine, leukotrienes and other mediators associated with the pathophysiology of asthma. Omalizumab is directed against the Fc region of human immunoglobulin E (IgE). By binding to circulating IgE at the site of FcεRI binding, this therapeutic antibody prevents the interaction of IgE with its receptor thus limiting mediator release. Treatment with omalizumab has also been demonstrated to reduce the expression of FcεRI on mast cells and basophils, providing additional clinical benefit.

**Human anti Omalizumab, clone AbD20760** is a Type 3 anti-idiotypic antibody that binds specifically to the drug/IgE complex. Clone AbD20760 does not recognise free omalizumab or free human IgE. Clone AbD20760 may be used to detect omalizumab captured via immobilized human IgE or to measure the level of drug/IgE complex in serum from patients.

Other Type 3 ([HCA237](#)) and Type 1 ([HCA235](#), [HCA236](#)) antibodies to omalizumab are also available from Bio-Rad in IgG1 and Fab formats. This range of anti omalizumab antibodies forms part of a wider and expanding portfolio of anti-idiotypic antibodies that have been developed for the detection of biotherapeutics.

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**Affinity** The intrinsic affinity of the monovalent form of Human anti Omalizumab antibody, clone AbD20760 is  $K_d = 0.58$  nM as measured by real time, label free molecular interaction analysis on immobilized omalizumab in complex with human IgE.

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**ELISA** This product may be used in an indirect ELISA to detect the omalizumab/IgE complex or to detect omalizumab bound to immobilized IgE.  
Protocol: [PK antigen capture ELISA to measure bound drug exclusively](#).

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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 \(1\): 178-90](#).

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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 for details.  
His-tag is a trademark of EMD Biosciences.

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| <b>Health And Safety Information</b> | Material Safety Datasheet documentation #10040 available at:<br><a href="https://www.bio-rad-antibodies.com/SDS/HCA238">https://www.bio-rad-antibodies.com/SDS/HCA238</a><br>10040  |
| <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

[HISPEC ASSAY DILUENT \(BUF049A\)](#)  
[HUMAN ANTI OMALIZUMAB \(DRUG/TARGET COMPLEX\) \(HCA237\)](#)  
[HUMAN ANTI OMALIZUMAB \(HCA236\)](#)  
[HUMAN ANTI OMALIZUMAB \(HCA235\)](#)  
[MOUSE ANTI PENTA HISTIDINE TAG:HRP \(MCA5995P\)](#)  
[RAT ANTI DYKDDDDK TAG:HRP \(MCA4764P\)](#)

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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)  
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