

Datasheet: HCA177G

Description:	HUMAN ANTI TRASTUZUMAB
Specificity:	TRASTUZUMAB
Other names:	HERCEPTIN
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	AbD18018_hlgG1
Isotype:	IgG1
Quantity:	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.

	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

Human IgG1 antibody (lambda light chain) selected from the HuCAL® phage display library and expressed in a human cell line. This antibody is supplied as a liquid.

Preparation

Purified IgG prepared by affinity chromatography on Protein A

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.01% Thiomersal

Approx. Protein Concentrations

IgG concentration 1.0 mg/ml

Immunogen

Trastuzumab

Specificity

Human Anti-Trastuzumab Antibody, clone AbD18018_hlgG1, is a paratope specific, high affinity, anti-idiotypic antibody that specifically recognizes the monoclonal antibody

drug trastuzumab and inhibits it binding to its target. The antibody can be used to measure the levels of trastuzumab and biosimilar products in bioanalytical assays.

Clone AbD18018_hIgG1 is a fully human recombinant monoclonal antibody with IgG1 isotype and is suitable as a reference standard in an anti-drug antibody (ADA) assay. Additionally the antibody can be used to develop a pharmacokinetic (PK) bridging assay to measure free drug in preclinical research and clinical trials using patient sera. This antibody, in full immunoglobulin format and conjugated to HRP, is recommended as the detection antibody, paired with antibody clone AbD16712 ([HCA166](#)) or clone AbD18141 ([HCA169](#)), both monovalent Fab format, as the capture antibody.

This clone is also available in IgG4 isotype format ([HCA270](#)) in order to offer assay developers increased flexibility in assay design. When used as an ELISA detection antibody, a secondary anti-human IgG4 antibody is required, which can be labeled according to the needs of the user's preferred assay platform.

Trastuzumab, also known as Herceptin, is a drug used in the treatment of HER2 positive breast cancer and other HER2 over-expressing cancers including HER2-positive metastatic cancers of the gastrointestinal tract. Trastuzumab binds to the HER2 (or c-erbB2) proto-oncogene, an EGF receptor-like protein found on 20-30% of breast cancer cells. The binding leads to antibody mediated (complement mediated) killing of the HER2 positive cells.

[View a summary of all Anti-Trastuzumab Antibodies](#)

Affinity

The monovalent intrinsic affinity of this antibody was measured as $K_D=0.02$ nM by real time, label-free molecular interaction analysis on immobilized trastuzumab.

ELISA

This product may be used as a detection reagent in a sandwich ELISA, when conjugated to HRP, together with [HCA169](#) as the capture reagent.

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

This antibody is fully human and can be used as a reference standard in an ADA assay.

Protocol: [ADA bridging ELISA](#)

References

1. Bults, P. *et al.* (2016) LC-MS/MS-Based Monitoring of In Vivo Protein Biotransformation: Quantitative Determination of Trastuzumab and Its Deamidation Products in Human Plasma. [Anal Chem. 88 \(3\): 1871-7.](#)
2. 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.](#)
3. Iwamoto, N. *et al.* (2018) Antibody drug quantitation in coexistence with anti-drug antibodies on nSMOL bioanalysis. [Anal Biochem. 540-541: 30-7.](#)

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.

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. Herceptin is a trademark of Genentech, Inc.
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Health And Safety Information	Material Safety Datasheet documentation #10094 available at: 10094: https://www.bio-rad-antibodies.com/uploads/MSDS/10094.pdf
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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 Useful Reagents

[MOUSE ANTI HUMAN IgG \(Fc\) CH2 DOMAIN:HRP \(MCA647P\)](#)

[HUMAN ANTI TRASTUZUMAB \(HCA166\)](#)

[HUMAN ANTI TRASTUZUMAB \(HCA169\)](#)

[LYNX RAPID HRP ANTIBODY CONJUGATION KIT \(LNK002P\)](#)

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

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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

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