

## Datasheet: HCA181

**BATCH NUMBER 0612**

<b>Description:</b>	HUMAN ANTI HUMAN HbA1c
<b>Specificity:</b>	HbA1c
<b>Other names:</b>	Glycated hemoglobin, Hb1c, Hemoglobin A1c
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	AbD15790
<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>Target Species</b>	Human
<b>Product Form</b>	A monovalent human recombinant Fab (lambda light chain) selected from the HuCAL® phage display library, expressed in <i>E. coli</i> . The antibody is tagged with a V5 tag and a double extended Strep-tag at the C-terminus of the antibody heavy chain. This antibody is supplied as a liquid.
<b>Preparation</b>	StrepTactin affinity chromatography
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.01% Thiomersal
<b>Approx. Protein Concentrations</b>	Total protein concentration 0.5 mg/ml

**Immunogen** The immunogens used in the generation of this antibody were:  
A glycosylated peptide, corresponding to N-terminal 9 amino acids of haemoglobin beta chain coupled to carrier proteins  
Purified HbA1c

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**External Database Links**

**UniProt:**

[P68871](#)    [Related reagents](#)

**Entrez Gene:**

[3043](#)    HBB    [Related reagents](#)

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**Specificity**

**Human anti Human HbA1c antibody, clone AbD15790** recognizes HbA1c, i.e. hemoglobin when glycosylated at the N-terminal valine of the hemoglobin  $\beta$  chain. It does not bind to non-glycosylated hemoglobin. Besides binding to the normal glycosylated hemoglobin, it also recognizes the glycosylated hemoglobin variants HbE and HbD, but does not recognize the HbS or HbC variants. Elevated HbF cannot be detected due to the absence of the hemoglobin  $\beta$  chain.

The measurement of HbA1c levels is used to identify the average plasma glucose concentration. In Diabetes mellitus, higher levels of HbA1c have been associated with cardiovascular disease and other diseases. Levels of more than 6.5% HbA1c (48 mmol/mol) are used as a criterion to diagnose diabetes.

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**Affinity**

The affinity of this antibody, as measured against the immunogen, was measured as  $K_D=13$  nM by real time, label-free molecular interaction analysis using HbA1c-BSA and HbA1c-TRF conjugates as immobilized antigen.

The affinity of this antibody, as measured against purified HbA1c, was measured as  $K_D=80$  nM by real time, label-free molecular interaction analysis using full length HbA1c as immobilized antigen.

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**ELISA**

This product is suitable for use indirect or indirect ELISA applications

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**Storage**

Store at +4°C or at -20°C if preferred.

Storage in frost-free freezers is not recommended.

This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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**Guarantee**

12 months from date of despatch

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**Acknowledgements**

Sold under license of U.S. Patents 6753136, 7785859 and 8273688 and corresponding patents. This antibody was developed by Bio-Rad, Zeppelinstr. 4, 82178 Puchheim, Germany.

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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 only, unless otherwise specified in writing by 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

Mouse Anti Synthetic Peptide STREP-TAG CLASSIC (MCA2489...) [HRP](#)

Mouse Anti Viral V5-TAG (MCA1360...) [Alk. Phos.](#), [Biotin](#), [HRP](#)

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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)  
'M371590:200612'

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