

Datasheet: HCA239Z

Description:	HUMAN ANTI gp41:Preservative Free
Specificity:	gp41
Other names:	HIV1 ENV
Format:	Preservative Free
Product Type:	Monoclonal Antibody
Clone:	AbD08066
Isotype:	HuCAL Fab monovalent
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
ELISA	▪			
Functional Assays (1)	▪			

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.

(1)**This antibody demonstrates neutralizing properties**

Target Species	Viral
Product Form	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 myc-tag (EQKLISEEDL) 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	None present
Approx. Protein Concentrations	Total protein concentration 0.5 mg/ml
Immunogen	Recombinant protein corresponding to a conserved internal trimeric coiled-coil of the N-heptad repeat (N-HR) of HIV-1 gp41.

**External Database
Links**

UniProt:

[Q76270](#) [Related reagents](#)

Specificity

Human Anti-gp41 Antibody, Clone AbD08066 specifically recognizes an epitope derived from the ectodomain of the Human Immunodeficiency Virus (HIV) type 1 envelope glycoprotein 41 (gp41).

This antibody was selected from the Human Combinatorial Antibody Library (HuCAL®) by panning on an HIV gp41-derived chimeric construct, NCCG-gp41, as described in [Louis et al. 2001](#).

The fusion of HIV-1 with the membrane of the host cell is the first step in the process of viral infection and replication and involves conformational changes in the gp120 and gp41 viral envelope proteins. It is now known that the HIV gp41 contains a highly conserved N-heptad repeat (N-HR) region which is conserved in many HIV-1 strains and as such it is hypothesized that this maybe a target for developing a vaccine ([Gustchina et al. 2010](#)).

Clone AbD8066 is a unique antibody that has been shown to be broadly neutralizing across a wide panel of B and C type HIV-1 viruses. The crystal structure of the N-HR mimetic 5-Helix with this antibody has been reported ([Gustchina et al. 2010](#), Protein Data Bank ID 3MA9).

ELISA

This product is suitable for use in indirect ELISA applications.

References

1. Gustchina, E. *et al.* (2010) Structural basis of HIV-1 neutralization by affinity matured Fabs directed against the internal trimeric coiled-coil of gp41. [PLoS Pathog. 6: e1001182](#).
 2. Gustchina, E. *et al.* (2009) Affinity maturation by targeted diversification of the CDR-H2 loop of a monoclonal Fab derived from a synthetic naïve human antibody library and directed against the internal trimeric coiled-coil of gp41 yields a set of Fabs with improved HIV-1 neutralization potency and breadth. [Virology. 393: 112-9](#).
 3. Gustchina, E *et al.* (2013) Complexes of Neutralizing and Non-Neutralizing Affinity Matured Fabs with a Mimetic of the Internal Trimeric Coiled-Coil of HIV-1 gp41. [PLoS One. 8: e78187](#)
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Storage

Store at -20°C only.
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.

Shelf Life

12 months from date of despatch

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. His-tag is a registered trademark of EMD Biosciences.

**Health And Safety
Information**

Material Safety Datasheet documentation #10162 available at:
10162: <https://www.bio-rad-antibodies.com/uploads/MSDS/10162.pdf>

Licensed Use

For in vitro research purposes only, unless otherwise specified in writing by Bio-Rad.

Regulatory

For research purposes only

Technical Advice

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

Related Products

Recommended Secondary Antibodies

Mouse Anti Synthetic Peptide HISTIDINE TAG (MCA5995...) [HRP](#)

Recommended Negative Controls

[HuCAL Fab-MH NEGATIVE CONTROL \(HCA051\)](#)

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