

## Datasheet: HCA117A

<b>Description:</b>	HUMAN ANTI Ki67
<b>Specificity:</b>	Ki67
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	AbD02815
<b>Isotype:</b>	HuCAL Fab bivalent
<b>Quantity:</b>	50 µg

## 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
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin (1)	▪			1/50 - 1/200
ELISA	▪			
Immunoprecipitation			▪	
Western Blotting			▪	
Functional Assays			▪	

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 product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.**

<b>Target Species</b>	Human
<b>Product Form</b>	A bivalent human recombinant Fab selected from the HuCAL® phage display library, expressed in <i>E. coli</i> . This Fab fragment is bivalent by dimerization of the bacterial alkaline phosphatase fusion protein. 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 lyophilised.
<b>Reconstitution</b>	Reconstitute with 0.5ml distilled water
<b>Preparation</b>	metal chelate affinity chromatography
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Stabilisers</b>	1% Bovine Serum Albumin
<b>Approx. Protein</b>	Total protein concentration 0.1mg/ml

## Concentrations

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**Immunogen** Peptide derived from the human Ki-67 protein. Sequence GFKELFQTPG, coupled via a C-terminal cysteine to carrier proteins.

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## External Database Links

**UniProt:**

[P46013](#) [Related reagents](#)

**Entrez Gene:**

[4288](#) MKI67 [Related reagents](#)

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## Specificity

**Human anti Ki67 antibody, clone 2815** recognizes the sequence GFKELFQ, which can be found eight times on the human Ki67 protein. Ki-67 antigen is expressed in proliferating cells but not in quiescent cells. Expression of this antigen occurs preferentially during late G1, S, G2, and M phases of the cell cycle, while in cells in G0 phase the antigen cannot be detected. Consequently, Ki-67 antigen expression is used in tumor pathology to detect proliferating cells in neoplastic diseases. In cultured cells, Ki-67 is expressed in the nucleolus of interphase cells.

The Ki-67 gene contains 15 exons. The Ki-67 repeat region, within which there is a 22-amino acid Ki-67 motif, is encoded by exon 13. The shorter isoform lacks exon 7. Northern blot analysis revealed multiple transcripts ranging from approximately 8.9 to 12.5 kb in proliferating but not quiescent cells. Immunoblot analysis showed expression of 320- and 359-kDa proteins. Sequence analysis predicted that the short-lived 2,896- and 3,256-amino acid protein isoforms contain potential nuclear targeting signals, over 200 potential phosphorylation sites, 19 N-myristoylation sites, 3 amidation sites, and numerous PEST sites. Antisense oligonucleotides inhibited cellular proliferation in a dose-dependent manner, suggesting that Ki-67 protein expression may be an absolute requirement for cell proliferation.

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## ELISA

This product is suitable for use in direct ELISA applications. Due to the presence of bovine serum albumin (BSA), this antibody is unsuitable for use as a capture reagent in sandwich ELISA applications. This product is also available without BSA, [please enquire](#).

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## Histology Positive Control Tissue

Human tonsil

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## Storage

Prior to reconstitution store at +4°C.  
After reconstitution store at -20°C.  
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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## Shelf Life

12 months from date of reconstitution.

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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 available at:  
Material Safety Datasheet Documentation #10041 available at:  
<https://www.bio-rad-antibodies.com/uploads/MSDS/10041.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

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

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

**North & South** Tel: +1 800 265 7376

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'M310202:170914'

**Printed on 10 Nov 2017**

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