

## Product datasheet

# Anti-Ki67 antibody ab833

★★★★☆ 13 Abreviews 107 References 4 Images

### Overview

<b>Product name</b>	Anti-Ki67 antibody
<b>Description</b>	Rabbit polyclonal to Ki67
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, ICC, IHC-P, IHC-Fr
<b>Species reactivity</b>	<b>Reacts with:</b> Human, African green monkey
<b>Immunogen</b>	Synthetic peptide corresponding to Human Ki67. Immunogen is from the 62 base pair region of the human Ki-67 antigen. Database link: <a href="#">P46013</a>
<b>Positive control</b>	Tonsil.

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.05% Sodium Azide Constituents: 1% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

### Applications

Our [Abpromise guarantee](#) covers the use of **ab833** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★	1/400. PubMed: 18635871
ICC	★★★★★	Use at an assay dependent concentration.

Application	Abreviews	Notes
IHC-P	★★★★☆	1/25 - 1/50. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. We recommend using an ABC system for detection of this antibody.
IHC-Fr		1/25 - 1/50. 1/25 - 1/50. We suggest an incubation period of 30 minutes at room temperature and to use DAB to stain the protein.

## Target

### Function

Required to maintain individual mitotic chromosomes dispersed in the cytoplasm following nuclear envelope disassembly (PubMed:27362226). Associates with the surface of the mitotic chromosome, the perichromosomal layer, and covers a substantial fraction of the chromosome surface (PubMed:27362226). Prevents chromosomes from collapsing into a single chromatin mass by forming a steric and electrostatic charge barrier: the protein has a high net electrical charge and acts as a surfactant, dispersing chromosomes and enabling independent chromosome motility (PubMed:27362226). Binds DNA, with a preference for supercoiled DNA and AT-rich DNA (PubMed:10878551). Does not contribute to the internal structure of mitotic chromosomes (By similarity). May play a role in chromatin organization (PubMed:24867636). It is however unclear whether it plays a direct role in chromatin organization or whether it is an indirect consequence of its function in maintaining mitotic chromosomes dispersed.

### Sequence similarities

Contains 1 FHA domain.  
 Contains 16 K167R repeats.  
 Contains 1 PP1-binding domain.

### Developmental stage

Expression 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 (at protein level) (PubMed:6206131). Present at highest level in G2 phase and during mitosis (at protein level). In interphase, forms fiber-like structures in fibrillar-deficient regions surrounding nucleoli (PubMed:2674163, PubMed:8799815).

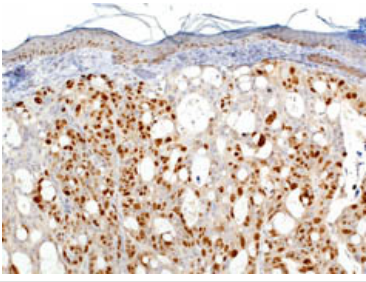
### Post-translational modifications

Phosphorylated. Hyperphosphorylated in mitosis (PubMed:10502411, PubMed:10653604). Hyperphosphorylated form does not bind DNA.

### Cellular localization

Chromosome. Nucleus. Nucleus, nucleolus. Associates with the surface of the mitotic chromosome, the perichromosomal layer, and covers a substantial fraction of the mitotic chromosome surface (PubMed:27362226). Associates with satellite DNA in G1 phase (PubMed:9510506). Binds tightly to chromatin in interphase, chromatin-binding decreases in mitosis when it associates with the surface of the condensed chromosomes (PubMed:15896774, PubMed:22002106). Predominantly localized in the G1 phase in the perinucleolar region, in the later phases it is also detected throughout the nuclear interior, being predominantly localized in the nuclear matrix (PubMed:22002106).

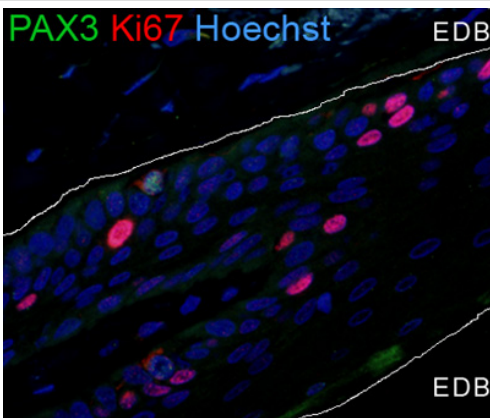
## Images



HT-29 xenograft tumor in mouse 20x  
pretreatment w/ citrate pH 6.0 using anti-Ki67  
antibody ab833 at 5 ug/mL for 30 min at RT.

Immunohistochemistry (Formalin/PFA-fixed paraffin-  
embedded sections) - Anti-Ki67 antibody (ab833)

Image kindly provided by Mithra Mahmouti as part of a  
review

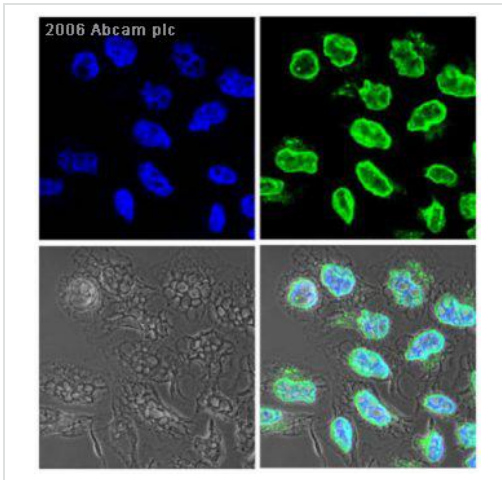


Immunohistochemical analysis of Human skin  
tissue, staining Ki67 (red) with ab833.

Antigen retrieval was performed by heat  
mediation in a EDTA/Tris buffer (pH 8.0).  
Sections were blocked with 10% NGS for 1  
hour at room temperature, followed by  
incubation with primary antibody (1/25). An  
AlexFluor®546 anti-rabbit IgG (1/500) was  
used as the secondary antibody.

Immunohistochemistry (Formalin/PFA-fixed paraffin-  
embedded sections) - Anti-Ki67 antibody (ab833)

Image from Medic S et al., PLoS One. 2010 Apr  
22;5(4):e9977. Fig 3.;  
doi:10.1371/journal.pone.0009977; April 22, 2010,  
PLoS ONE 5(4): e9977.

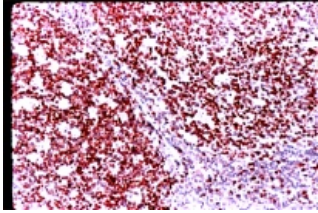


Immunocytochemistry/ Immunofluorescence - Anti-Ki67 antibody (ab833)

This image is courtesy of an abreview submitted by Dr Mal Niladri, Cleveland Clinic.

Immunocytochemistry/ Immunofluorescence analysis of HeLa cells labeling Ki67 with ab833 at 1/50 dilution.

HeLa cells are the classic example of an immortalized human epithelial cell line from a fatal cervical carcinoma transformed by human papillomavirus 18 (HPV18) that grown as adherent cells layer and maintain contact inhibition in vitro. 2% paraformaldehyde for 15 min was used to fix the cells, and permealized the cells with Triton-X100 (0.1%) for 10 min and then incubated cells with primary antibody Ki-67 (1/50) for overnight at 4 degree centigrade. Image was taken using a confocal laser scanning microscope that equipped with an additional differential Interference Contrast (DIC) mode. Image here demonstrate DAPI (blue-nuclear stain, upper left panel), Ki-67 (Green, upper right panel, shows nuclear localization in actively dividing cells), Hela cells in culture-DIC (phase) image (lower left panel) and superimpose image (lower right panel). The expression of the human Ki-67 protein is strictly associated with cell proliferation. During interphase, the antigen is exclusively detected as several prominent specks within the nucleus and a weak finely dispersed staining throughout the nucleoplasm, whereas in mitosis most of the protein is relocated to the surface of the chromosomes. The fact that the Ki-67 protein is present during all active phases of the cell cycle [G(1), S, G(2), and mitosis], but is absent from resting cells [G(0)], makes it an excellent marker for determining the so-called Ki-67 staining index (Ki67-SI) of a given cell population.



#### ab833 - immunohistochemistry

Formalin fixed paraffin embedded human tonsil stained with Ki-67, using ABC and AEC chromogen.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ki67 antibody (ab833)

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

### Our Promise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

### Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors