


Product datasheet

Anti-Ki67 antibody [SP6], prediluted ab21700

KO VALIDATED Recombinant RabMAB

★★★★★ [3 Abreviews](#) [27 References](#) [9 Images](#)

Overview

Product name	Anti-Ki67 antibody [SP6], prediluted
Description	Rabbit monoclonal [SP6] to Ki67, prediluted
Host species	Rabbit
Specificity	ab21700 recognises Ki67.
Tested applications	Suitable for: WB, IHC-P, Flow Cyt (Intra), ICC/IF
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Rat 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Ramos and HeLa cell lysates. IHC-P: Human tonsil and thymus tissue; Human endometrial and breast adenocarcinoma tissue. ICC/IF: HeLa and HAP1 cells. Flow Cyt (intra): HAP1 cells.
General notes	<p>This product was switched from hybridoma to recombinant format on 25th October 2019.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAB[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAB[®] patents.</p> <p>This product is FOR RESEARCH USE ONLY. For commercial use, please contact partnerships@abcam.com.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C.
Storage buffer	pH: 7.60 Preservative: 0.1% Sodium azide Constituents: Tris buffered saline, 1% BSA

	Inert stabilizer
Purity	Protein A purified
Clonality	Monoclonal
Clone number	SP6
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab21700 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
WB		Use at an assay dependent concentration. Predicted molecular weight: 358 kDa.
IHC-P	★★★★★ (2)	1/1. Antigen retrieval: heat mediated antigen retrieval with sodium citrate buffer (pH 6.0)
Flow Cyt (Intra)		Use at an assay dependent concentration.
ICC/IF	★★★★★ (1)	Use at an assay dependent concentration. Use at an assay dependent concentration. If fixing cells in 4% PFA (20 min, room temp), it is recommended to permeabilized cells with 0.1% Triton-X for 5 min

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 fibrillarin-deficient regions surrounding nucleoli (PubMed:2674163,

PubMed:8799815).

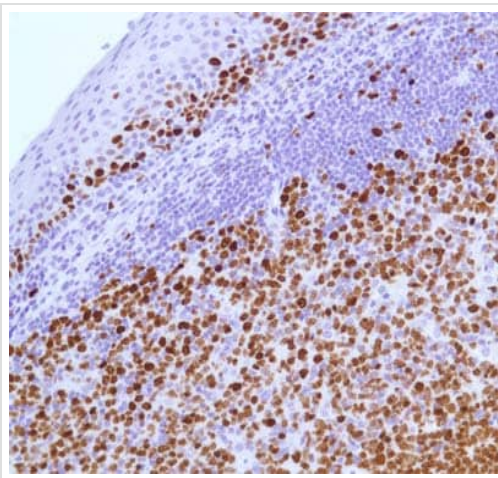
Post-translational modifications

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

Cellular localization

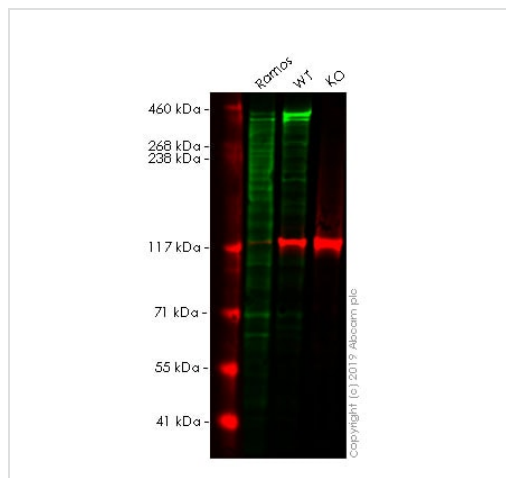
Chromosome. Nucleus. Nucleus, nucleolus. Associates with the surface of the mitotic chromosome, the perichromosomal layer, and covers a substantial fraction of the mitotic chromosome surface (PubMed:27362226). Associates with satellite DNA in G1 phase (PubMed:9510506). Binds tightly to chromatin in interphase, 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



Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human tonsil tissue, staining Ki67 with ab21700.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ki67 antibody [SP6], prediluted (ab21700)



All lanes : Anti-Ki67 antibody [SP6] ([ab16667](#)) at 1/100 dilution

Lane 1 : Ramos cell lysate

Lane 2 : Wild-type HeLa cell lysate

Lane 3 : MKI67 knockout HeLa cell lysate

Lysates/proteins at 20 μ g per lane.

Performed under reducing conditions.

Predicted band size: 358 kDa

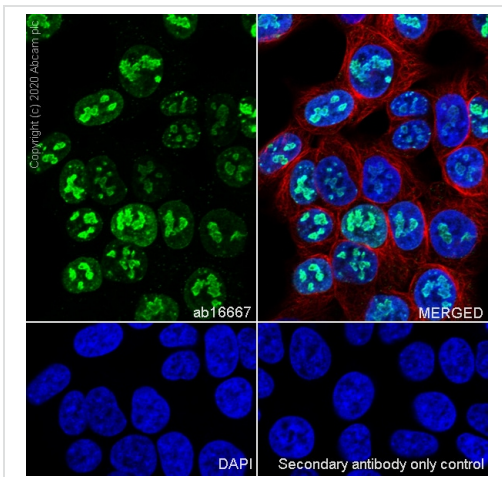
Observed band size: 359 kDa

Western blot - Anti-Ki67 antibody [SP6], prediluted (ab21700)

This data was developed using the same antibody clone in a different buffer formulation ([ab16667](#)).

Lanes 1 - 3: Merged signal (red and green). Green - [ab16667](#) observed at 359 kDa. Red - loading control, [ab130007](#) observed at 125 kDa.

[ab16667](#) was shown to react with Ki67 in wild-type HeLa cells. Loss of signal was observed when knockout cell line [ab255407](#) (knockout cell lysate [ab263762](#)) was used. Wild-type and Ki67 knockout samples were subjected to SDS-PAGE. [ab16667](#) and Anti-Vinculin antibody [VIN-54] ([ab130007](#)) were incubated overnight at 4°C at 1 in 100 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

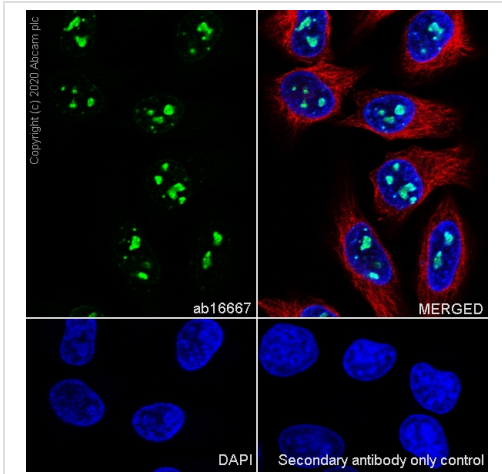


Immunocytochemistry/ Immunofluorescence - Anti-Ki67 antibody [SP6], prediluted (ab21700)

This data was developed using [ab16667](#), the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 100% methanol-fixed, None permeabilized parental HAP1 cells labelling Ki67 with [ab16667](#) at 1/1000 dilution, followed by [ab150077](#) Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (2 µg/mL) (Green). Confocal image showing nucleolar staining in parental HAP1 cell line [ab195889](#) Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (2.5 µg/mL) (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is [ab150077](#) Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1000 dilution (2 µg/mL).

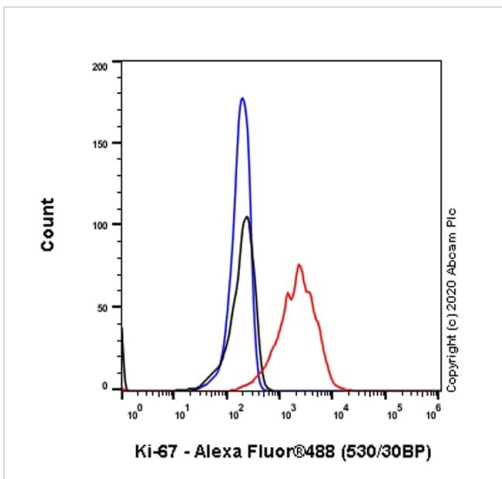


Immunocytochemistry/ Immunofluorescence - Anti-Ki67 antibody [SP6], prediluted (ab21700)

This data was developed using [ab16667](#), the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 100% methanol-fixed, None permeabilized HeLa cells labelling Ki67 with [ab16667](#) at 1/1000 dilution, followed by [ab150077](#) Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (2 µg/mL) (Green). Confocal image showing nucleolar staining in HeLa cell line [ab195889](#) Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (2.5 µg/mL) (Red). The Nuclear counterstain was DAPI (Blue).

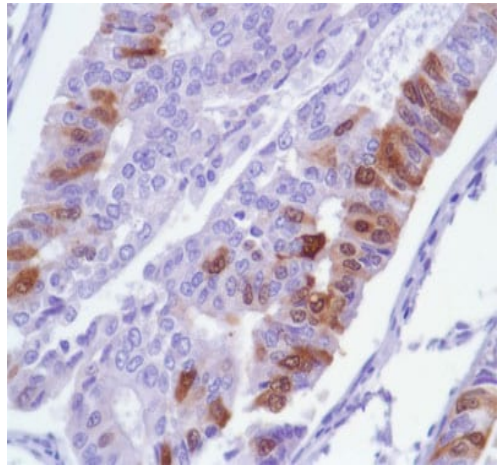
Secondary antibody only control: Secondary antibody is [ab150077](#) Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1000 dilution (2 µg/mL).



Flow Cytometry (Intracellular) - Anti-Ki67 antibody [SP6], prediluted (ab21700)

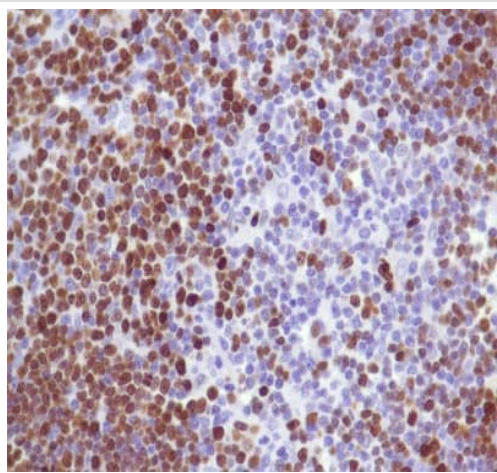
This data was developed using [ab16667](#), the same antibody clone in a different buffer formulation.

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized parental HAP1 (Wildtype control Human chronic myelogenous leukemia near-haploid cell line) cells labelling Ki67 with [ab16667](#) at 1/500 dilution (0.1 µg) (Red) compared with a Rabbit monoclonal IgG ([ab172730](#)) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) at 1/2000 dilution was used as the secondary antibody.



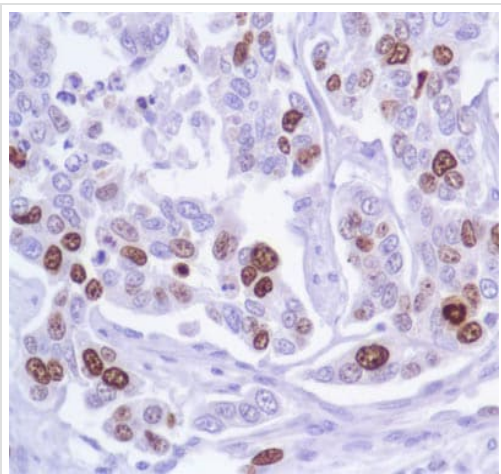
Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human endometrial adenocarcinoma tissue, staining Ki67 with ab21700.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ki67 antibody [SP6], prediluted (ab21700)



Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human thymus tissue, staining Ki67 with ab21700.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ki67 antibody [SP6], prediluted (ab21700)



Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human breast adenocarcinoma tissue, staining Ki67 with ab21700.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ki67 antibody [SP6], prediluted (ab21700)

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Ki67 antibody [SP6], prediluted (ab21700)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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