

Product datasheet

Anti-Ki67 antibody [MKI67/2465] ab238020

★★★★★ [3 Abreviews](#) [7 References](#) [6 Images](#)

Overview

Product name	Anti-Ki67 antibody [MKI67/2465]
Description	Mouse monoclonal [MKI67/2465] to Ki67
Host species	Mouse
Tested applications	Suitable for: Protein Array, Flow Cyt, IHC-P, ICC
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment within Human Ki67 aa 2293-2478. The exact sequence is proprietary. Database link: P46013
Positive control	IHC-P: Human tonsil tissue. ICC: MCF7 cells. Flow: HeLa cells.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA
Purity	Protein A/G purified
Purification notes	Purified from Bioreactor concentrate.
Clonality	Monoclonal
Clone number	MKI67/2465
Isotype	IgG2b
Light chain type	kappa

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab238020 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
Protein Array		Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration. 1-2 µg/million cells
IHC-P	★★★★★ (1)	Use a concentration of 1 - 2 µg/ml. Primary incubation for 30 minutes at room temperature.
ICC	★★★★★ (2)	Use a concentration of 1 - 2 µg/ml.

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

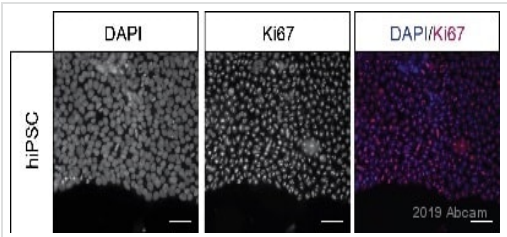
Expression occurs preferentially during late G1, S, G2 and M phases of the cell cycle, while in cells in G0 phase the antigen cannot be detected (at protein level) (PubMed:6206131). Present at highest level in G2 phase and during mitosis (at protein level). In interphase, forms fiber-like structures 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.

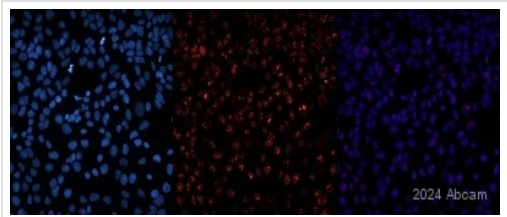
Cellular localization

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).



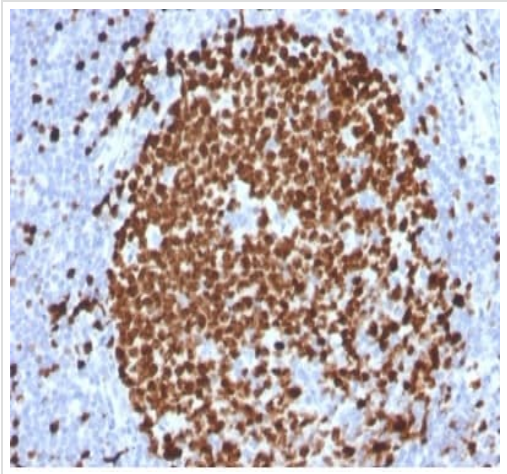
Immunocytochemistry - Anti-Ki67 antibody
[MKI67/2465] (ab238020)
This image is courtesy of an anonymous Abreview

Immunocytochemistry analysis of formaldehyde-fixed human hiSPC cells, staining with ab238020 at 1/100 dilution. Secondary antibody was Alexa Fluor® 647 goat anti mouse 1/1000 dilution. Cells were incubated with the primary antibody with 1% BSA 0.3% Triton X for 12 hours at 4°C . Blocking was done using 3% BSA for 1 hour.



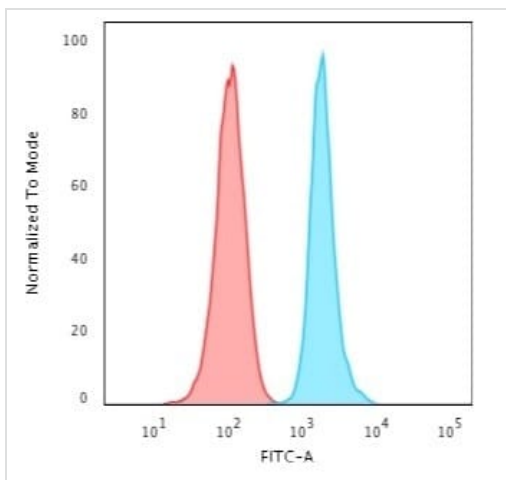
Immunocytochemistry - Anti-Ki67 antibody
[MKI67/2465] (ab238020)
This image is courtesy of an Abreview submitted by Ingrid Saldana

Immunocytochemistry analysis of paraformaldehyde-fixed human hES cells differentiated into neural crest cells permeabilized with 0.5% Triton, staining with ab238020 at 1/100 dilution. Secondary antibody was Alexa Fluor™ 647 Goat anti Mouse at 1/500 dilution. Cells were incubated with the primary antibody with 10% serum in PBS for 18 hours at 4°C . Blocking was done using 10% serum for 2 hours at room 25°C.



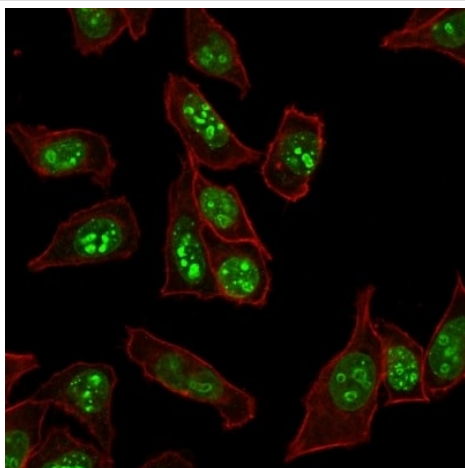
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ki67 antibody
[MKI67/2465] (ab238020)

Formalin-fixed, paraffin-embedded human tonsil tissue stained for Ki67 using ab238020 at 2 µg/ml in immunohistochemical analysis.



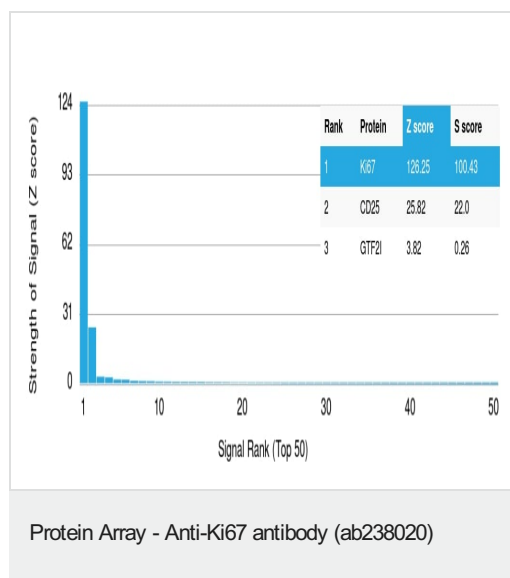
Flow Cytometry - Anti-Ki67 antibody [MKI67/2465]
(ab238020)

Flow cytometric analysis of HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Ki67 with ab238020 at 2 μ g per 10^6 cells (blue) compared to an isotype control (red). A Goat Anti-mouse CF488 secondary antibody was used.



Immunocytochemistry - Anti-Ki67 antibody
[MKI67/2465] (ab238020)

MCF7 (human breast adenocarcinoma cell line) cells stained for Ki67 (green) using ab238020 at 2 μ g/mL in ICC. The membrane is labelled with phalloidin (red).



ab238020 was tested in protein array against over 19000 different full-length human proteins.

Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt™ array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProt™ are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target.

A MAb is specific to its intended target if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.

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