

# Ki-67

Rabbit Monoclonal antibody(Mab)

Catalog # AD80028

## Product Information

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|-------------------|------------------------|
| Application       | IHC-P                  |
| Primary Accession | <a href="#">P46013</a> |
| Reactivity        | Human                  |
| Host              | Rabbit                 |
| Clonality         | Monoclonal             |
| Clone Names       | 176B3C4                |
| Calculated MW     | 358694                 |

## Additional Information

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|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gene ID     | 4288                                                                                                                                                  |
| Gene Name   | MKI67 ( <a href="#">HGNC:7107</a> )                                                                                                                   |
| Other Names | Proliferation marker protein Ki-67, Antigen identified by monoclonal antibody Ki-67, Antigen KI-67, Antigen Ki67, MKI67 ( <a href="#">HGNC:7107</a> ) |
| Dilution    | IHC-P~~Ready-to-use                                                                                                                                   |
| Storage     | Maintain refrigerated at 2-8°C.                                                                                                                       |
| Precautions | Ki-67 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.                                                      |

## Protein Information

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| Name     | MKI67 ( <a href="#">HGNC:7107</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Function | Protein that associates with the surface of mitotic chromosomes and acts both as a chromosome repellent during early mitosis and chromosome attractant during late mitosis (PubMed: <a href="#">27362226</a> , PubMed: <a href="#">32879492</a> , PubMed: <a href="#">35513709</a> , PubMed: <a href="#">39153474</a> ). Required to maintain individual mitotic chromosomes dispersed in the cytoplasm following nuclear envelope disassembly (PubMed: <a href="#">27362226</a> ). During early mitosis, relocates from nucleoli to the chromosome surface where it forms extended brush structures that cover a substantial fraction of the chromosome surface (PubMed: <a href="#">27362226</a> ). The MKI67 brush structure 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: <a href="#">27362226</a> ). During mitotic anaphase, the MKI67 brush structure collapses and MKI67 switches from a chromosome repellent to a chromosome attractant to promote chromosome clustering and facilitate the exclusion of large cytoplasmic particles from the future nuclear space |

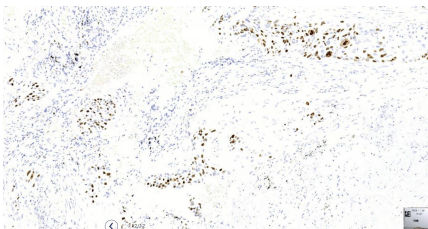
(PubMed:[32879492](#), PubMed:[39153474](#)). Mechanistically, dephosphorylation during mitotic exit and simultaneous exposure of a conserved basic patch induce the RNA-dependent formation of a liquid-like condensed phase on the chromosome surface, promoting coalescence of neighboring chromosome surfaces and clustering of chromosomes (PubMed:[39153474](#)). Binds premature ribosomal RNAs during anaphase; promoting liquid-liquid phase separation (PubMed:[28935370](#), PubMed:[39153474](#)). 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; it is however unclear whether it plays a direct role in chromatin organization or whether it is an indirect consequence of its function in mitotic chromosome (PubMed:[24867636](#)).

### Cellular Location

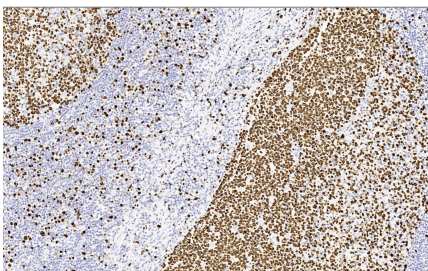
Chromosome. Nucleus. Nucleus, nucleolus. Note=During early mitosis, relocalizes from nucleoli to the surface of the mitotic chromosome, the perichromosomal layer, and covers a substantial fraction of the mitotic chromosome surface (PubMed:27362226) Associates with satellite DNA in G1 phase (PubMed:9510506). 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

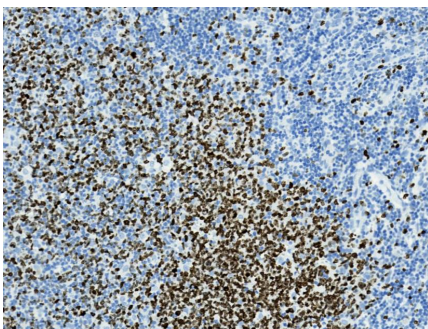
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Immunohistochemical analysis of formalin-fixed and paraffin-embedded human lung carcinoma tissue was performed with Ki-67 primary antibody, followed by peroxidase-conjugated secondary antibody and DAB staining.

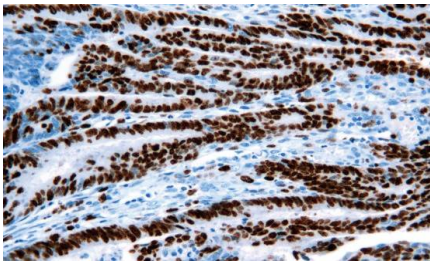


Immunohistochemical analysis of formalin-fixed and paraffin-embedded human tonsil tissue was performed with Ki-67 primary antibody, followed by peroxidase-conjugated secondary antibody and DAB staining.

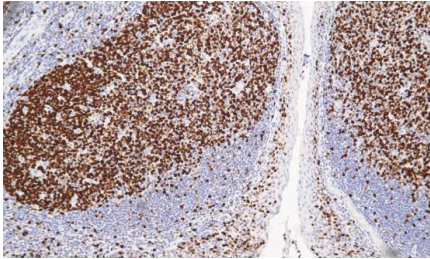


Immunohistochemical analysis of formalin-fixed and paraffin-embedded human tonsil tissue was performed with Ki-67 primary antibody, followed by peroxidase-conjugated secondary antibody and DAB staining.

Immunohistochemical analysis of formalin-fixed and paraffin-embedded human colon carcinoma tissue was performed with Ki-67 primary antibody, followed by peroxidase-conjugated secondary antibody and DAB staining.



staining.



Immunohistochemical analysis of formalin-fixed and paraffin-embedded human tonsil tissue was performed with Ki-67 primary antibody, followed by peroxidase-conjugated secondary antibody and DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.