

**Ki67 Antibody**  
**Rabbit mAb**  
**Catalog # AP90545**

## Specification

### Ki67 Antibody - Product Information

Application	WB, IHC, ICC
Primary Accession	<a href="#">P46013</a>
Clonality	Monoclonal
<b>Other Names</b>	
MKI67; KIA; Antigen KI-67; Ki-67;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	358694 Da

### Ki67 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Ki67
Description	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). Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage Condition and Buffer	

### Ki67 Antibody - Protein Information

**Name** MKI67 ([HGNC:7107](#))

#### 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="http://www.uniprot.org/citations/27362226" target="\_blank">27362226</a>, PubMed:<a href="http://www.uniprot.org/citations/32879492" target="\_blank">32879492</a>, PubMed:<a href="http://www.uniprot.org/citations/35513709" target="\_blank">35513709</a>, PubMed:<a href="http://www.uniprot.org/citations/39153474" target="\_blank">39153474</a>). Required to maintain individual mitotic chromosomes dispersed in the cytoplasm following nuclear envelope disassembly (PubMed:<a href="http://www.uniprot.org/citations/27362226" target="\_blank">27362226</a>). During early mitosis, relocalizes from nucleoli to the

chromosome surface where it forms extended brush structures that cover a substantial fraction of the chromosome surface (PubMed:<a href="http://www.uniprot.org/citations/27362226" target="\_blank">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="http://www.uniprot.org/citations/27362226" target="\_blank">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:<a href="http://www.uniprot.org/citations/32879492" target="\_blank">32879492</a>, PubMed:<a href="http://www.uniprot.org/citations/39153474" target="\_blank">39153474</a>). 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:<a href="http://www.uniprot.org/citations/39153474" target="\_blank">39153474</a>). Binds premature ribosomal RNAs during anaphase; promoting liquid-liquid phase separation (PubMed:<a href="http://www.uniprot.org/citations/28935370" target="\_blank">28935370</a>, PubMed:<a href="http://www.uniprot.org/citations/39153474" target="\_blank">39153474</a>). Binds DNA, with a preference for supercoiled DNA and AT-rich DNA (PubMed:<a href="http://www.uniprot.org/citations/10878551" target="\_blank">10878551</a>). 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:<a href="http://www.uniprot.org/citations/24867636" target="\_blank">24867636</a>).

### Cellular Location

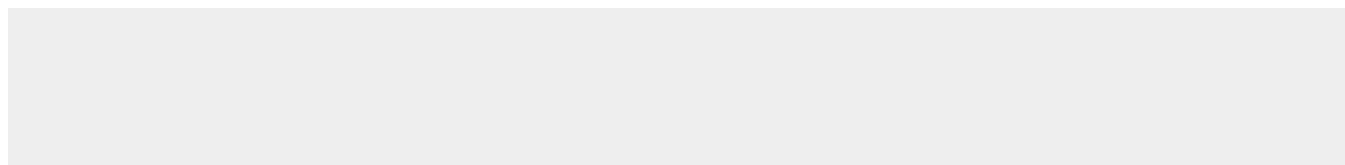
Chromosome. Nucleus. Nucleus, nucleolus. Note=During early mitosis, relocates from nucleoli to the surface of the mitotic chromosome, the perichromosomal layer, and covers a substantial fraction of the mitotic chromosome surface (PubMed:27362226) Associates with satellite DNA in G1 phase (PubMed:9510506).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

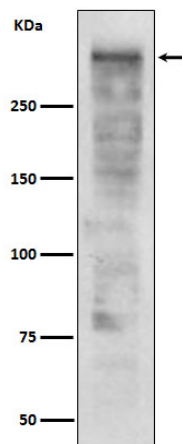
### Ki67 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Ki67 Antibody - Images





Western blot analysis of Ki67 expression in Ramos cell lysate.