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Antigen KI-67 / MKI67 (aa98-110) Antibody (N-Term)

Peptide-affinity purified goat antibody
Catalog # AF3819a

Specification

Antigen KI-67 / MKI67 (aa98-110) Antibody (N-Term) - Product Information

Application	**E**
Primary Accession	P46013
Other Accession	NP_002408.3, NP_001139438.1, 4288
Predicted	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**358694**

Antigen KI-67 / MKI67 (aa98-110) Antibody (N-Term) - Additional Information

Gene ID 4288

Other Names
Antigen KI-67, MKI67

Format
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Antigen KI-67 / MKI67 (aa98-110) Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Antigen KI-67 / MKI67 (aa98-110) Antibody (N-Term) - 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:27362226, PubMed:32879492, PubMed:35513709, PubMed:39153474). 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). 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:27362226). 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:27362226). 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)

Antigen KI-67 / MKI67 (aa98-110) Antibody (N-Term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Antigen KI-67 / MKI67 (aa98-110) Antibody (N-Term) - Images

Antigen KI-67 / MKI67 (aa98-110) Antibody (N-Term) - Background

This antibody is expected to recognize both reported isoforms (NP_002408.3; NP_001139438.1).

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Antigen KI-67 / MKI67 (aa98-110) Antibody (N-Term) - References

Claudins and ki-67: potential markers to differentiate low- and high-grade transitional cell carcinomas of the urinary bladder. Törzsök P, Riesz P, Kenessey I, Székely E, Somorácz A, Nyirády P, Romics I, Schaff Z, Lotz G, Kiss A. J Histochem Cytochem. 2011 Nov;59(11):1022-30. PMID: 22043024