

Ki-67 antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22390a

Specification

Ki-67 antibody - Product Information

Application	WB,E
Primary Accession	P46013
Reactivity	Hamster
Predicted	Pig
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Calculated MW	358694

Ki-67 antibody - Additional Information

Gene ID 4288

Other Names

Proliferation marker protein Ki-67, Antigen identified by monoclonal antibody Ki-67, Antigen KI-67, Antigen Ki67, MKI67 ([HGNC:7107](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=7107))

Target/Specificity

This antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between amino acids from human.

Dilution

WB~~1:1000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

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

Precautions

Ki-67 antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Ki-67 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:[27362226](#), PubMed:[32879492](#), PubMed:[35513709](#), PubMed:[39153474](#)). Required to maintain individual mitotic chromosomes dispersed in the cytoplasm following nuclear envelope disassembly (PubMed:[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](#))

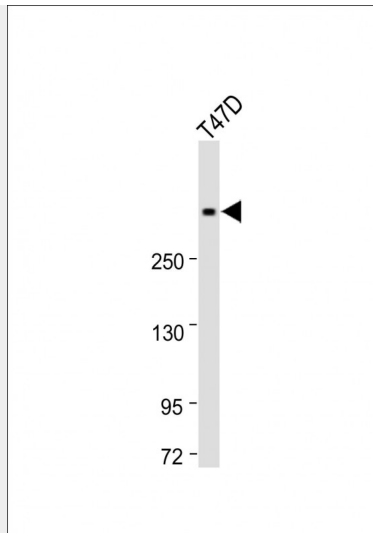
Ki-67 antibody - Protocols

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

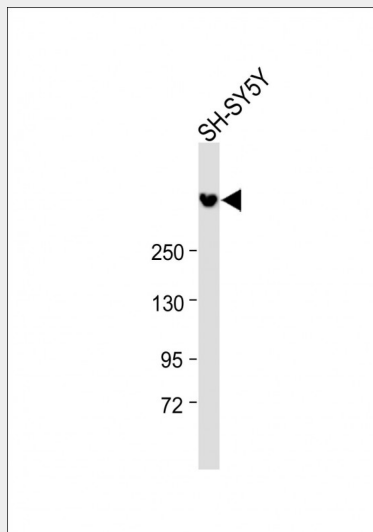
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Ki-67 antibody - Images





All lanes : Anti-Ki-67 antibody at 1:500 dilution Lane 1: T47D whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Observed band size : 359kDa Blocking/Dilution buffer: 5% NFDN/TBST.



All lanes : Anti-Ki-67 antibody at 1:1000 dilution Lane 1: SH-SY5Y whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Observed band size : 359kDa Blocking/Dilution buffer: 5% NFDN/TBST.

Ki-67 antibody - Background

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 (Probable).

Ki-67 antibody - References

- Schlueter C., et al. *J. Cell Biol.* 123:513-522(1993).
Deloukas P., et al. *Nature* 429:375-381(2004).
Gerdes J., et al. Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
Gerdes J., et al. *Int. J. Cancer* 31:13-20(1983).
Gerdes J., et al. *J. Immunol.* 133:1710-1715(1984).