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# KI67 Antibody
**Purified Mouse Monoclonal Antibody**
**Catalog # AO1452a**

## Specification

### KI67 Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC** |
| Primary Accession | P46013 |
| Reactivity | **Human** |
| Host | **Mouse** |
| Clonality | **Monoclonal** |
| Isotype | **IgG1** |
| Calculated MW | **358kDa KDa** |

**Description**
Ki67, also known as MKI67, it is the prototypic cell cycle related nuclear protein, expressed by proliferating cells in all phases of the active cell cycle (G1, S, G2 and M phase). It is absent in resting (G0) cells. Ki67 antibodies are useful in establishing the cell growing fraction in neoplasms (immunohistochemically quantified by determining the number of Ki67 positive cells among the total number of resting cells = Ki67 index). In neoplastic tissues the prognostic value is comparable to the tritiated thymidine labelling index. The correlation between low Ki67 index and histologically low grade tumours is strong. Ki67 is routinely used as a neuronal marker of cell cycling and proliferation.

**Immunogen**
Synthetic peptide corresponding to aa (CEDLAGFKELFQTPG) of human KI67, conjugated to KLH.

**Formulation**
Ascitic fluid containing 0.03% sodium azide.

### KI67 Antibody - Additional Information

**Gene ID** 4288

**Other Names**
Antigen KI-67, MKI67

**Dilution**
WB~~1/500 - 1/2000
IHC~~1/200 - 1/1000

**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**
KI67 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### KI67 Antibody - Protein Information

**Name** MKI67 (HGNC:7107)

**Function**
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>). Associates with the surface of the mitotic chromosome, the perichromosomal layer, and covers a substantial fraction of the chromosome surface (PubMed:<a href="http://www.uniprot.org/citations/27362226" target="_blank">27362226</a>). 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>). 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 (PubMed:<a href="http://www.uniprot.org/citations/24867636" target="_blank">24867636</a>). 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).

**Cellular Location**
Chromosome. Nucleus. Nucleus, nucleolus Note=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).

## 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 Cytomety
- Cell Culture

## KI67 Antibody - Images

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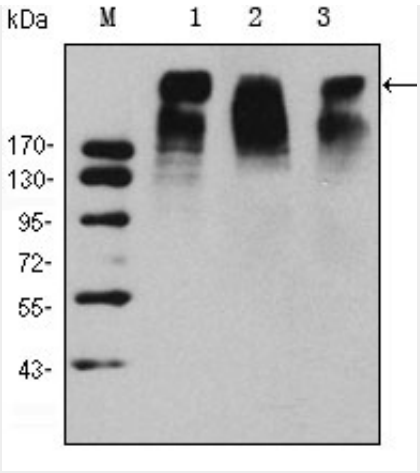



Figure 1: Western blot analysis using KI67 mouse mAb against Hela (1), MCF-7 (2) and Raji (3) cell lysate.

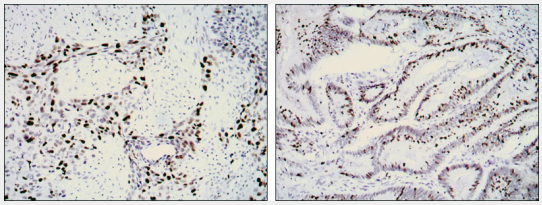


Figure 2: Immunohistochemical analysis of paraffin-embedded lung cancer (left) and rectal cancer (right) using KI67 mouse mAb with DAB staining.

**KI67 Antibody - References**

1. Folia Histochem Cytobiol. 2007;45(4):357-66. 2. Tumori. 2008 May-Jun;94(3):389-97.