

**Anti-Ki67 Picoband Antibody**  
Catalog # ABO11750**Specification****Anti-Ki67 Picoband Antibody - Product Information**

Application	IHC
Primary Accession	<a href="#">P46013</a>
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Antigen KI-67(MKI67) detection. Tested with WB, IHC-P, ICC in Human.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-Ki67 Picoband 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))

**Calculated MW**

358694 MW KDa

**Application Details**

Immunocytochemistry , 0.5-1 µg/ml, Human, -<br>Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human<br>

**Subcellular Localization**

Nucleus . Nucleus, nucleolus . Chromosome . 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. In mitosis, it is present on all chromosomes.

**Protein Name**

Antigen KI-67

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

**Immunogen**

E.coli-derived human Ki67 recombinant protein (Position: K2860-I3256).

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage****At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.****Sequence Similarities**

Contains 1 FHA domain.

**Anti-Ki67 Picoband 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

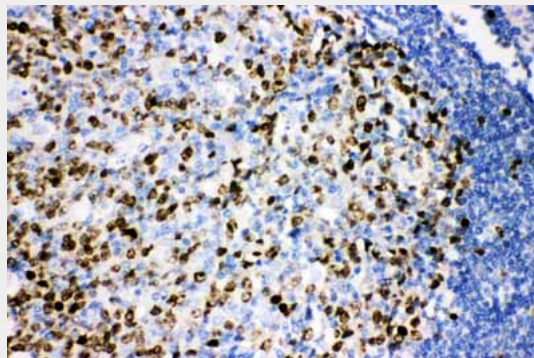
Chromosome. Nucleus. Nucleus, nucleolus. Note=During early mitosis, relocalizes from nucleoli to the surface of the mitotic chromosome, the perichromosomal layer, and covers a substantial fraction of the mitotic chromosome surface (PubMed:27362226) Associates with satellite DNA in G1 phase (PubMed:9510506).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

### Anti-Ki67 Picoband Antibody - Protocols

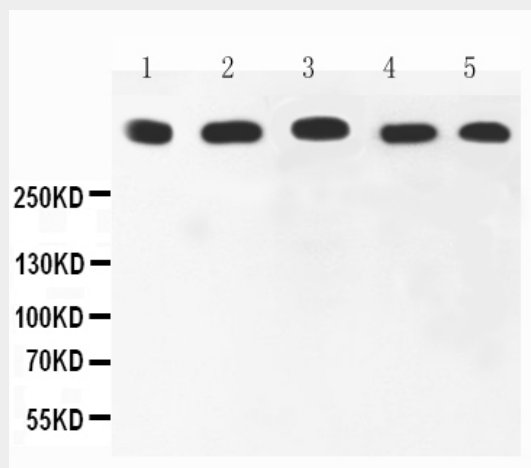
Provided below are standard protocols that you may find useful for product applications.

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

### Anti-Ki67 Picoband Antibody - Images



Anti-Ki67 Picoband antibody, ABO11750-1.JPGIHC(P): Human Tonsil Tissue



Anti-Ki67 Picoband antibody, ABO11750-2.jpg All lanes: Anti-Ki67 (ABO11750) at 0.5ug/ml Lane 1: HELA Whole Cell Lysate at 40ug Lane 2: MCF-7 Whole Cell Lysate at 40ug Lane 3: COLO320 Whole Cell Lysate at 40ug Lane 4: HEPG2 Whole Cell Lysate at 40ug Lane 5: SKOV Whole Cell Lysate at 40ug Predicted bind size: 358KD Observed bind size: 358KD

### **Anti-Ki67 Picoband Antibody - Background**

Ki-67 (Proliferation-related Ki-67 antigen), also known as MKI67 or KIA, is a protein that in humans is encoded by the MKI67 gene. From study of a panel of human-rodent somatic cell hybrids, it has been demonstrated that a gene involved in the expression of the MKI67 antigen is located on chromosome 10. By in situ hybridization, Fonatsch et al. (1991) regionalized the MKI67 gene to chromosome 10q25-qter. By FISH, Traut et al. (1998) mapped the mouse Mki67 gene to chromosome 7F3-F5. Antigen KI-67 is a nuclear protein that is associated with and may be necessary for cellular proliferation. Furthermore it is associated with ribosomal RNA transcription. Inactivation of antigen KI-67 leads to inhibition of ribosomal RNA synthesis.