10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-KI67 Rabbit Monoclonal Antibody

Rabbit Monoclonal Antibody
Catalog # ABV11829

Product Information

Application	WB, IHC
Primary Accession	P46013
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	358694

Additional Information

Gene ID	4288
Positive Control	WB: HeLa and K562 cell lysate; IHC: human breast cancer and tonsil tissue
Application & Usage	IHC: 1:100 - 1:400 dilution ; WB: 1:100 - 1:500 dilution
Alias Symbol	MKI67
Other Names	KIA, KI-67, MKI67
Appearance	Colorless liquid
Formulation	In 50% Glycerol/PBS with 1% BSA and 0.09% sodium azide
Reconstitution & Storage	-20 °C
Background Descriptions	
Precautions	Anti-KI67 Rabbit Monoclonal Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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).

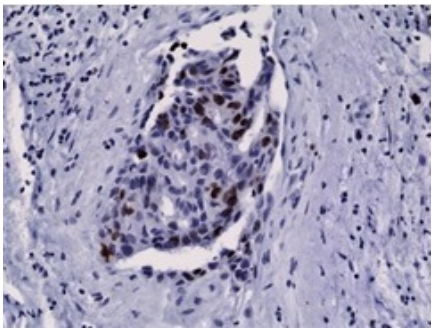
Cellular Location

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)

Background

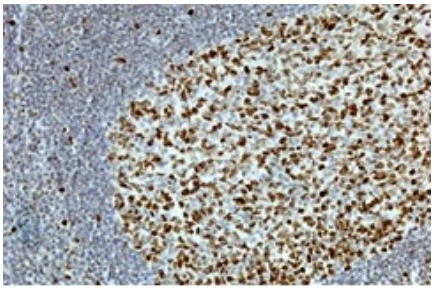
Ki-67 is a nuclear protein that is expressed in proliferating cells and may be required for maintaining cell proliferation. Ki-67 has been used as a marker for cell proliferation of solid tumors and some hematological malignancies. A correlation has been demonstrated between Ki-67 index and the histopathological grade of neoplasms. Assessment of Ki-67 expression in renal and ureter tumors shows a correlation between tumor proliferation and disease progression, thus making it possible to differentiate high-risk patients. Ki-67 expression may also prove to be important for distinguishing between malignant and benign peripheral nerve sheath tumors.

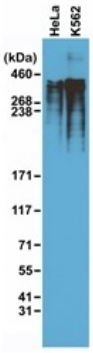
Images



Immunohistochemical staining of FFPE human breast cancer tissue sections, using anti-Human KI67 Rabbit Monoclonal antibody.

Immunohistochemical staining of FFPE human tonsil tissue sections, using anti-human KI67 rabbit monoclonal antibody.





Western blot of Hela and K562 cell lysates using anti-KI67 rabbit monoclonal antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.