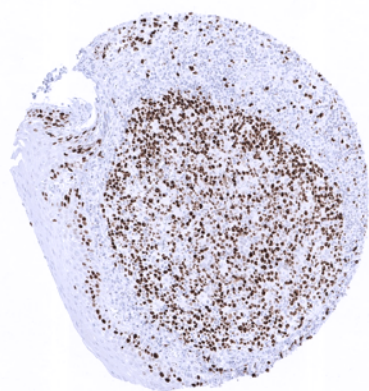


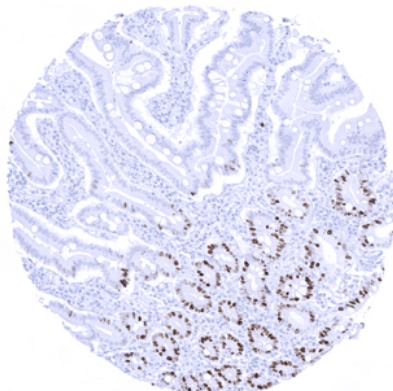
## Anti-Ki67 Antibody MSVA-267M / Mouse monoclonal

Human SwissProt	P46013
Human Gene Symbol	MKI67
Synonyms	KI-67; Ki67; KI-67 Antigen (KIA); MKI67; Proliferation related Ki-67 antigen
Specificity	Ki67
Immunogen	Recombinant fragment of human Ki67 protein
Isotype	Mouse / IgG1, kappa
Species Reactivity	Human
Localization	Nuclear

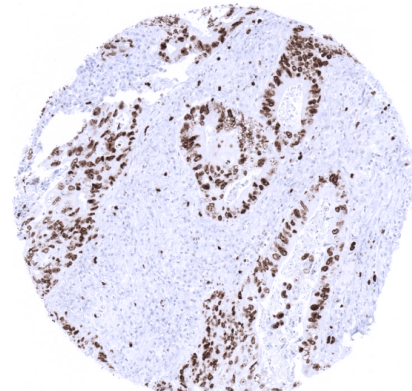
Storage & Stability	Antibody with azide - store at 2 to 8°C. Antibody without azide - store at -20 to -80°C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	Purified antibody in Tris pH 7,3-7,7 with 1% BSA, <0,1% NaN <sub>3</sub> .
Positive Control	tonsil (moderate to strong nuclear staining in 80-90% of the germinal centre B-cells and in the vast majority of the suprabasal squamous epithelial cells).
Negative Control	liver (Nuclear staining reaction only in scattered hepatocytes (<1%), no or only a weak cytoplasmic staining reaction)



High fraction of Ki-67 positive cells in a germinal centre and the basal layer of surface epithelium of a tonsil.



Strong Ki-67 positive cells in a fraction of cells in duodenal glands..



High Ki-67 labeling index (>80%) in a colorectal adenocarcinoma.

### Biology

The Ki-67 protein is a labile, nonhistone nuclear protein expressed in G1, S, G2 and M phases of cell cycle, then rapidly catabolized at end of M phase and not detectable in G0 and early G1 cells. When cells enter mitosis, chromosomes undergo chromosome condensation and are coated by a proteinaceous sheath termed the perichromosomal layer (PCL). The PCL comprises approximately one-third of the protein mass of mitotic chromosomes. Ki-67 is one of the earliest proteins associated with the PCL and critical for its formation (2932224). Ki-67 remains on the PCL until telophase. The percentage of Ki-67 positive (tumor) cells – also called Ki-67 labeling index (Ki-67 LI) - is widely used for quantification of tumor cell proliferation. Ki-67 positive cells can be seen in virtually all tissues. The number of these cells depends on the proliferative activity, which is particularly high in the cortex of the thymus, germinal centres of lymphoid tissues, crypts of gastro-intestinal epithelium, and basal/supra cell layers of squamous epithelia and urothelium.

### Potential Research Applications

- Ki67 is often used in studies employing multicolor-immunofluorescence.
- The prognostic role of Ki67 LI is established in many tumor types. Large-scale studies are still needed to exactly determine the practical clinical utility of Ki67 measurement.
- Methods are needed for precise and automated Ki67 measurement in cancer tissues.

-The fraction of Ki67 positive lymphocyte subpopulations such as for example Ki67 positive CD8 positive cytotoxic T-lymphocytes is under intensive evaluation.

-The topographical distribution of Ki67 positive lymphocyte subtypes may be relevant.

### Protocol Suggestions

**Dilution 1: 150; pH 9 is optimal.** Freshly cut sections should be used (less than 10 days between cutting and staining).

Suggested manual protocol: heat-induced antigen retrieval for 5 minutes in an autoclave at 121°C in pH 9,0 buffer. Apply MSVA-267M at 37°C for 60 minutes at a dilution of 1:200.

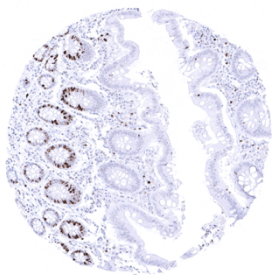
### Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

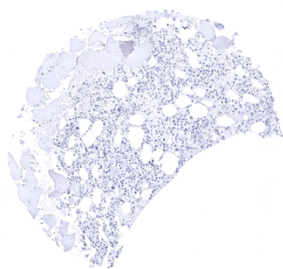
Not for resale without express authorization.

### Warranty

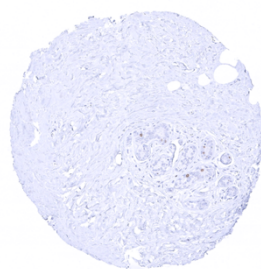
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



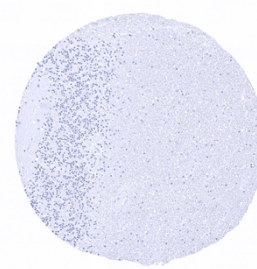
Appendix, mucosa



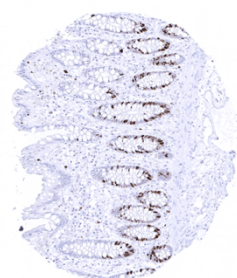
Bone marrow



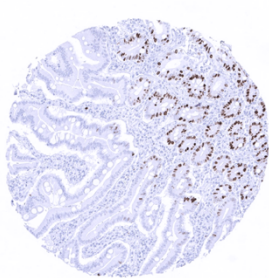
Breast



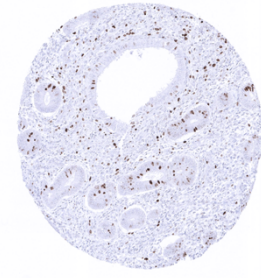
Cerebellum, grey (Stratum neuronorum)



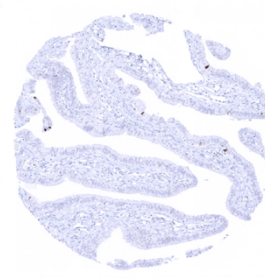
Colon descendens, mucosa



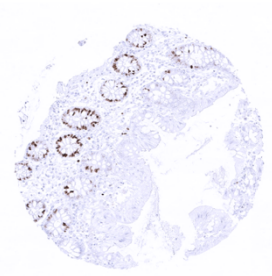
Duodenum, mucosa



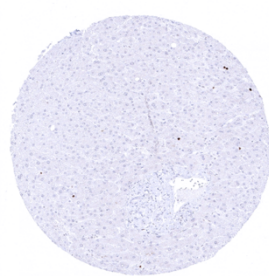
Endometrium, proliferation



Fallopian tube, mucosa



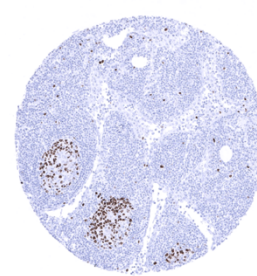
Ileum, mucosa



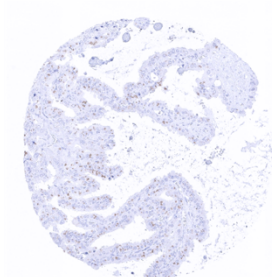
Liver-The liver represents an ideal normal tissue control for Ki-67 staining quality. Less than 1% of the hepatocytes should stain and cytoplasmic staining should be absent



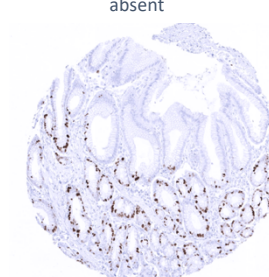
Lung



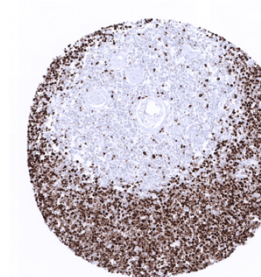
Lymph node



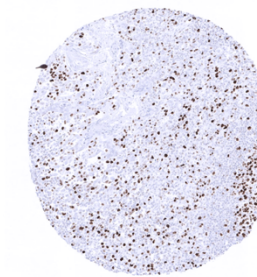
Seminal vesicle



Stomach, antrum



Thymus - the highest proliferative activity (Ki-67 LI) in normal tissues is seen in the thymic cortex



Tonsil