Anti-Ki67 Antibody [PSH0-02] - BSA and Azide free

HA750570

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	IHC-P, FC
Molecular Wt:	Predicted band size: 359 kDa
Clone number:	PSH0-02

Description: Antigen KI-67, also known as Ki-67, Ki-67 or MKI67 (Marker Of Proliferation Ki-67), is a protein that in humans is encoded by the MKI67 gene (antigen identified by monoclonal antibody Ki-67). Antigen KI-67 is a nuclear protein that is associated with cellular proliferation. Altering Ki-67 expression levels did not significantly affect cell proliferation in vivo. Ki-67 mutant mice developed normally and cells lacking Ki-67 proliferated efficiently. Furthermore, it is associated with ribosomal RNA transcription. Inactivation of antigen KI-67 leads to inhibition of ribosomal RNA synthesis. The Ki-67 protein (also known as MKI67) is a cellular marker for proliferation, and can be used in immunohistochemistry. It is strictly associated with cell proliferation. During interphase, the Ki-67 antigen can be exclusively detected within the cell nucleus, whereas in mitosis most of the protein is relocated to the surface of the chromosomes. Ki-67 protein is present during all active phases of the cell cycle (G1, S, G2, and mitosis), but is absent in resting (quiescent) cells (G0). Cellular content of Ki-67 protein markedly increases during cell progression through S phase of the cell cycle. In breast cancer Ki67 identifies a high proliferative subset of patients with ER-positive breast cancer who derive greater benefit from adjuvant chemotherapy. Ki-67 is an excellent marker to determine the growth fraction of a given cell population. The fraction of Ki-67-positive tumor cells (the Ki-67 labeling index) is often correlated with the clinical course of cancer. The best-studied examples in this context are prostate, brain and breast carcinomas, as well as nephroblastoma and neuroendocrine tumors. For these types of tumors, the prognostic value for survival and tumor recurrence have repeatedly been proven in uni- and multivariate analysis.

Immunogen:	Synthetic peptide within human Ki67 aa 1000-1200.
Positive control:	Human cervix carcinoma tissue, human colon carcinoma tissue, human lymph nodes tissue, A431, Hela.
Subcellular location:	Chromosome, Nucleus, nucleolus.
Database links:	SwissProt: P46013 Human
Recommended Dilutions:	
IHC-P	1:2,000
FC	1:500-1:1,000
Storage Buffer:	PBS (pH7.4).
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

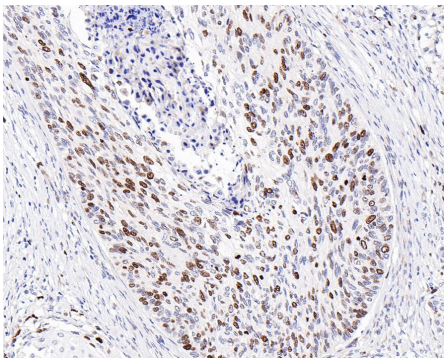

Fig1: Immunohistochemical analysis of paraffin-embedded human cervix carcinoma tissue with Rabbit anti-Ki67 antibody (HA750570) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750570) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

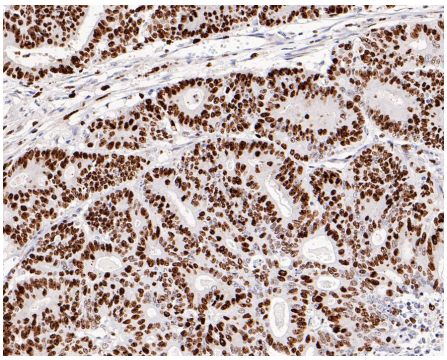

Fig2: Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue with Rabbit anti-Ki67 antibody (HA750570) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750570) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

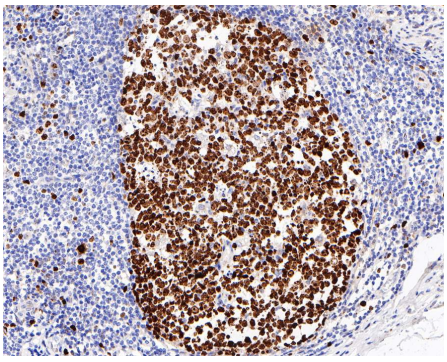

Fig3: Immunohistochemical analysis of paraffin-embedded human lymph nodes tissue with Rabbit anti-Ki67 antibody (HA750570) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750570) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

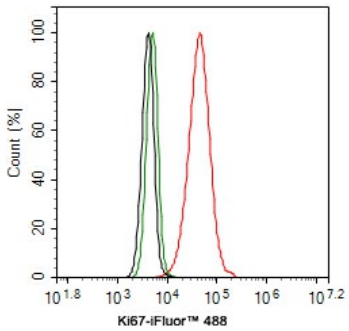

Fig4: Flow cytometric analysis of A431 cells labeling Ki67.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA750570, 1ug/ml) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

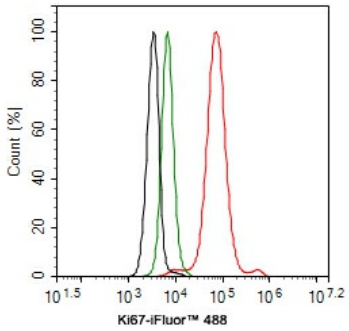

Fig5: Flow cytometric analysis of Hela cells labeling Ki67.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA750570, 1ug/ml) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. Zhang A et al. The Role of Ki67 in Evaluating Neoadjuvant Endocrine Therapy of Hormone Receptor-Positive Breast Cancer. Front Endocrinol (Lausanne). 2021 Nov
2. Travaglino A et al. Ki67 as a prognostic marker in uterine leiomyosarcoma: A quantitative systematic review. Eur J Obstet Gynecol Reprod Biol. 2021 Nov