

Product Specification Sheet

Human Ki67 (Proliferation Marker) antibodies

Cat. KI672-M Mouse monoclonal anti-human Ki67 peptide IgG **SIZE:** 100 ug

Ki67 antigen 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.

FUNCTION: Thought to be required for maintaining cell proliferation.

SUBUNIT: Interacts with KIF15. Binds through the FHA domain to MKI67IP.

SUBCELLULAR LOCATION: Nucleus. Note=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.

ALTERNATIVE PRODUCTS: 2 named isoforms [FASTA] produced by alternative splicing. Name Long
Isoform ID P46013-1
This is the isoform sequence displayed in this entry.
Name Short
Isoform ID P46013-2
Features which should be applied to build the isoform sequence:
VSP_004298.

DEVELOPMENTAL STAGE: Expression of this antigen occurs preferentially during late G1, S, G2 and M phases of the cell cycle, while in cells in G0 phase the antigen cannot be detected.
SIMILARITY: Contains 1 FHA domain.

Source of Antigen and Antibodies

Antigen	Synthetic peptide from 62 aa region of the human Ki-67 antigen (protein accession #P46013, 3256 aa)
Ab Host/type	Mouse, polyclonal IgG aff pure # KI672-M
2-ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage

Affinity pure IgG

100 ug/100ul solution lyophilized powder

supplied in Buffer: PBS, pH 7.2,

Reconstitute powder in PBS at 1 mg/ml

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

ICC/IF: Use at an assay dependent concentration.

IHC-P: 1/25 - 1/50. Formalin fixed paraffin embedded tissue sections require high temperature antigen unmasking with 10 mM citrate buffer, pH 6.0 prior to immunostaining. This antibody will not work without optimal antigen retrieval. This is probably the most critical step.

IHC-Fr: 1/25 - 1/50.

We suggest an incubation period of 30 minutes at room temperature and to use DAB to stain the protein (IF may give problems as the protein is nuclear).

Specificity & Cross-reactivity

This antibody recognizes Ki67 from human. Antibody crossreactivity antibodies in other species is not established. This antibody reacts with a nuclear antigen present in proliferating human cells. It can be used to evaluate the ki-67 labeling index in various tumors.

General References: Schlueter C (1993) JCB 125, 513-522; Li H (2004) J. Mol. Biol. 335, 371-381; Byeon I_J (2004) Nat. Struct. Biol. 12, 987-993; Takagi M (2001) JBC 276, 25386-25391

*This product is for in vitro research use only.

KI672-M

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