

Ki-67 Antibody / MKI67 [clone 31K02] (FY12964)

Catalog No.	Formulation	Size
FY12964	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	31K02
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P46013
Applications	Immunohistochemistry: 1:50-1:200 Immunofluorescence: 1:50-1:200 Immunocytochemistry/Immunofluorescence: 1:50-1:200
Limitations	This Ki-67 antibody is available for research use only.

Description

Ki-67 antibody detects the protein Ki-67, encoded by the MKI67 gene. Ki-67 is a nuclear protein expressed in proliferating cells and is one of the most widely used markers for cellular proliferation in research and clinical diagnostics. This protein is absent in resting cells (G0) but present during all active phases of the cell cycle, including G1, S, G2, and mitosis. Ki-67 antibody provides researchers with an essential tool to measure cell proliferation rates, assess tumor aggressiveness, and evaluate treatment responses in cancer studies. Its widespread use in histopathology reflects its reliability as a biomarker for growth activity.

Ki-67 is involved in ribosomal RNA transcription and organization of the nucleolus during interphase. During mitosis, it localizes to the perichromosomal layer, forming a structural scaffold that helps protect chromosomes and maintain proper segregation. Studies using Ki-67 antibody have revealed that depletion of this protein disrupts chromosomal condensation and segregation, underscoring its functional roles beyond serving as a proliferation marker. These insights

have expanded its importance from being a passive marker of division to an active participant in cell cycle regulation.

In cancer biology, Ki-67 is one of the most important clinical biomarkers. Tumor samples are routinely stained with Ki-67 antibody to determine the proliferation index, which correlates with tumor grade, aggressiveness, and prognosis. High Ki-67 labeling indices are observed in fast-growing tumors such as breast, prostate, and brain cancers, and are associated with poor outcomes. Conversely, lower Ki-67 indices are linked to slower-growing neoplasms and better survival rates. Pathologists use Ki-67 antibody immunohistochemistry to quantify nuclear staining percentages in tumor biopsies, providing valuable prognostic information.

Beyond oncology, Ki-67 antibody is applied in regenerative biology and developmental studies. Since this protein marks actively dividing cells, it is used to track stem cell proliferation, tissue regeneration, and embryonic development. Immunofluorescence assays with Ki-67 antibody help identify proliferative niches in tissues such as bone marrow, gut, and brain. Flow cytometry can also measure Ki-67 expression at the single-cell level, making it useful in studies of immune activation, hematopoietic stem cell dynamics, and vaccine responses.

By supplying validated Ki-67 antibody reagents, NSJ Bioreagents enables researchers to study both the biological roles of this protein and its diagnostic utility. The ability to detect proliferating cells across experimental systems makes Ki-67 antibody indispensable in cancer research, clinical pathology, and developmental biology.

Application Notes

Optimal dilution of the Ki-67 antibody should be determined by the researcher.

Immunogen

Recombinant protein with human Ki67 (Position: K2860-I3256) was used as the immunogen for the Ki-67 antibody.

Storage

Store the Ki-67 antibody at -20oC.