

**Purified anti-human Ki-67**

**Catalog # / Size:** 2352505 / 25 µg  
2352510 / 100 µg

**Clone:** Ki-67

**Isotype:** Mouse IgG1, κ

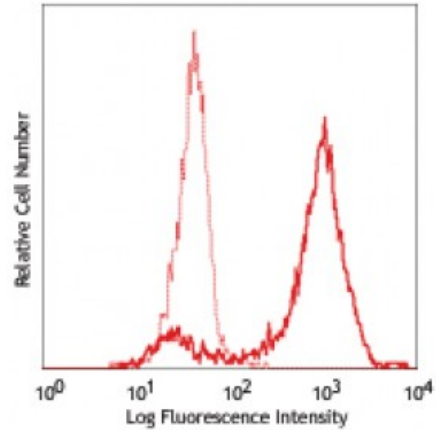
**Immunogen:** Nuclei of the Hodgkin lymphoma cell line L428

**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

**Concentration:** 0.5



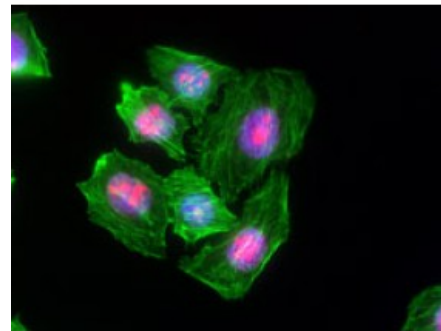
Resting (dashed line) or PHA-activated human peripheral blood lymphocytes (day-3, solid line) fixed and permeabilized with 70% ethanol, then intracellularly stained with Ki-67 PE.

**Applications:**

**Applications:** Other

**Recommended Usage:** Each lot of this antibody is quality control tested by our Ki-67 staining protocol below. For flow cytometric staining, the suggested use of this reagent is ≤0.25 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

**Application Notes:** Additional reported applications (for the relevant formats) include: immunohistochemical staining of frozen tissue sections<sup>1</sup>, Western blotting<sup>3</sup>, and immunofluorescence microscopy<sup>4</sup>.



HeLa cells were fixed with 1% paraformaldehyde (PFA) for 10 minutes, permeabilized with 0.5% Triton X-100 for 10 minutes, and blocked with 5% FBS for 30 minutes. The cells were then intracellularly stained with 2.5 microg/ml of purified Ki-67 (clone Ki-

**Ki-67 Staining Protocol:**

1. Prepare 70% ethanol and chill at -20°C.
2. Prepare target cells of interest and wash 2X with PBS by centrifuge at 350xg for 5 minutes.
3. Discard supernatant and loosen the cell pellet by vortexing.
4. Add 3 ml cold 70% ethanol drop by drop to the cell pellet while vortexing.
5. Continue vortexing for 30 seconds and then incubate at -20°C for 1 hour.
6. Wash 3X with BioLegend Cell Staining Buffer and then resuspend the cells at the concentration of 0.5-10 x 10<sup>6</sup>/ml.

7. Mix 100 microL cell suspension with proper fluorochrome-conjugated Ki-67 antibody and incubate at room temperature in the dark for 30 minutes.
8. Wash 2X with BioLegend Cell Staining Buffer and then resuspend in 0.5 ml cell staining buffer for flow cytometric analysis.

- Application**
- References:**
1. Gerdes J, *et al.* 1983. *Int. J. Cancer* 31:13. (IHC)
  2. Gerdes J, *et al.* 1984. *J. Immunol.* 133:1710. (ICFC)
  3. Schluter C, *et al.* 1993 *J. Cell Biol.* 123:513. (IHC, WB)
  4. Bading H, *et al.* 1989 *Exp. Cell. Res.* 185:50. (IF)
  5. Guha P, *et al.* 2013. *PNAS.* 110:5052. [PubMed](#)
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**Description:** Antigen Ki-67 is a nuclear protein expressed as two isoforms with molecular weights of 395 and 345 kD. Both isoforms contain one forkhead-associated domain and 16 concatenated "Ki-67 repeats," each containing the epitope recognized by the mAb Ki-67. The antigen Ki-67 interacts with Hk1p2, hNIFK, and chromobox protein homolog 1, 3, and 5. Ki-67 is required for cell proliferation and its expression is restricted to the phases G<sub>1</sub>, S, G<sub>2</sub>, and M of the cell cycle. This characteristic makes Ki-67 an excellent marker for proliferating cells and is commonly used as one of the prognostic factors in cancer studies. Ki-67 has also been used to study myocyte proliferation after myocardial infarction as well as lymphocyte proliferation during infection, and has been used in neurons of patients with different neuropathologies.

- Antigen**
- References:**
1. Byeon IJ, *et al.* 2005. *Nat. Struct. Mol. Biol.* 12:987.
  2. Yerushalmi R, *et al.* 2010. *Lancet. Oncol.* 11:174.
  3. Beltrami AP, *et al.* 2001. *N. Engl. J. Med.* 344:1750.
  4. Sachsenber