

PE anti-human Ki-67

Catalog # / Size: 350503 / 25 tests
350504 / 100 tests

Clone: Ki-67

Isotype: Mouse IgG1, κ

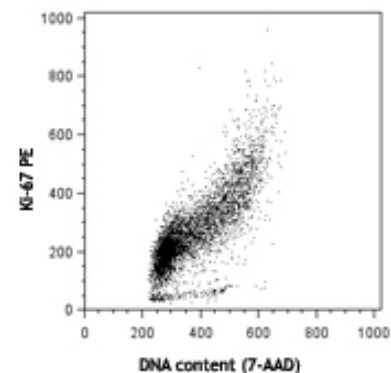
Immunogen: Nuclei of the Hodgkin lymphoma cell line L428

Reactivity: Human, **Cross-Reactivity:** Bovine

Preparation: The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions. The solution is free of unconjugated PE and unconjugated antibody.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

Storage: The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze.**



Human T leukemia cell line, Jurkat, fixed and permeabilized with 70% ethanol, then intracellularly stained with Ki-67 PE and counterstained with 7-AAD (Cat No. 420404) for DNA staining.

Applications:

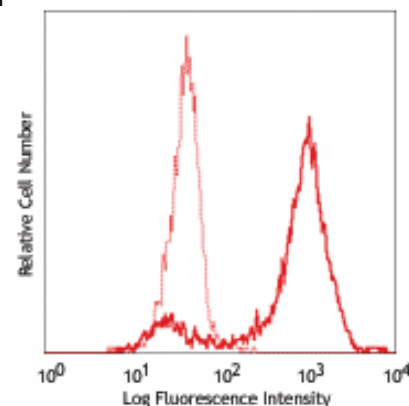
Applications: ICFC - Quality tested

Recommended Usage: Each lot of this antibody is quality control tested by our Ki-67 staining protocol below. **Test size products are transitioning from 20 μ l to 5 μ l per test.** Please check your vial or your CoA to find the suggested use of this reagent per million cells in 100 μ l staining volume or per 100 μ l of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. Read more at www.biolegend.com/testsize regarding the test size change.

Application Notes: Additional reported applications (for the relevant formats) include: immunohistochemical staining of frozen tissue sections¹, Western blotting³, and immunofluorescence microscopy⁴.

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 $\times 10^6$ /ml.
7. Mix 100 μ l 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.



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.

- 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

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 Hklp2, hNIFK, and chromobox protein homolog 1, 3, and 5. Ki-67 is required for cell proliferation and its expression is restricted to the phases G₁, S, G₂, 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.



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3. Beltrami AP, *et al.* 2001. *N. Engl. J. Med.* 344:1750.
4. Sachsenberg N, *et al.* 1998. *J. Exp. Med.* 187:1295.
5. Nagy Z, *et al.* 1997. *Acta. Neuropathol.* 93:294.

Related Products: Product

PE Mouse IgG1, κ Isotype Ctrl
Cell Staining Buffer
RBC Lysis Buffer (10X)
Human TruStain FcX™ (Fc Receptor
Blocking Solution)

Clone

MOPC-21

Application

FC, ICFC
FC, ICC, ICFC
FC, ICFC
FC, ICC, ICFC



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