

Spark PLUS UV395™ anti-human Ki-67 Antibody

Catalog# / Size	350543 / 25 tests 350544 / 100 tests
Clone	Ki-67
Regulatory Status	RUO
Other Names	Antigen Ki-67
Isotype	Mouse IgG1, κ
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 G ₁ , S, G ₂ , 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.

Product Details

Verified Reactivity	Human
Reported Reactivity	Cow
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Nuclei of the Hodgkin lymphoma cell line L428
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with Spark PLUS UV395™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool).
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is 5 μ L per million cells in 100 μ L staining volume or 5 μ L per 100 μ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * Spark PLUS UV395™ has a maximum excitation of 355 nm and a maximum emission of 385 nm.
Excitation Laser	Ultraviolet Laser (355 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunohistochemical staining of frozen tissue sections ¹ , Western blotting ³ , and immunofluorescence microscopy ⁴ .

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 10⁶/ml.
7. Mix 100 µl 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

(PubMed link indicates BioLegend citation)

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](#)

RRID

AB_3720558 (BioLegend Cat. No. 350543)
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Antigen Details

Structure	Two isoforms with molecular weights of 395 and 345 kD, one forkhead-associated domain, 16 concatenated Ki-67 repeats, located in nucleus
Distribution	Expressed in the phases G ₁ , S, G ₂ , and M of the cell cycle
Function	Required for cell proliferation
Interaction	Chromobox protein homolog 1, 3 and 5, Hklp2, and hNIFK
Biology Area	Cell Biology, Cell Cycle/DNA Replication, DNA Repair/Replication
Molecular Family	Nuclear Markers
Antigen References	1. Byeon IJ, <i>et al.</i> 2005. <i>Nat. Struct. Mol. Biol.</i> 12:987. 2. Yerushalmi R, <i>et al.</i> 2010. <i>Lancet. Oncol.</i> 11:174. 3. Beltrami AP, <i>et al.</i> 2001. <i>N. Engl. J. Med.</i> 344:1750. 4. Sachsenberg N, <i>et al.</i> 1998. <i>J. Exp. Med.</i> 187:1295. 5. Nagy Z, <i>et al.</i> 1997. <i>Acta. Neuropathol.</i> 93:294.
Gene ID	4288

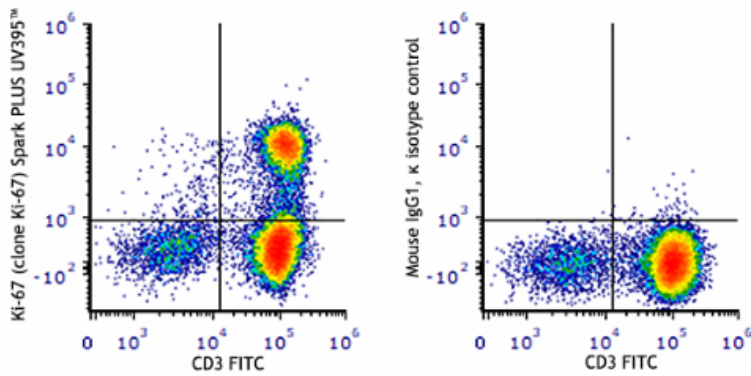
Related Protocols

- [Intracellular Flow Cytometry Staining Protocol](#)

Other Formats

Brilliant Violet 750™ anti-human Ki-67, Alexa Fluor® 700 anti-human Ki-67, PE/Dazzle™ 594 anti-human Ki-67, Purified anti-human Ki-67, APC anti-human Ki-67, Alexa Fluor® 488 anti-human Ki-67, Brilliant Violet 605™ anti-human Ki-67, Brilliant Violet 510™ anti-human Ki-67, Purified anti-human Ki-67 (Maxpar® Ready), PerCP/Cyanine5.5 anti-human Ki-67, Alexa Fluor® 594 anti-human Ki-67, Spark PLUS UV395™ anti-human Ki-67, Brilliant Violet 711™ anti-human Ki-67, Brilliant Violet 785™ anti-human Ki-67, StarBright UltraViolet 740 anti-human Ki-67, PE anti-human Ki-67, Brilliant Violet 421™ anti-human Ki-67, Alexa Fluor® 647 anti-human Ki-67, Pacific Blue™ anti-human Ki-67, PE/Cyanine7 anti-human Ki-67, Brilliant Violet 650™ anti-human Ki-67

Product Data



PHA-activated (3 days) human peripheral blood mononuclear cells were surface stained with anti-human CD3 (clone UCHT1) FITC. Cells were then fixed and permeabilized with 70% ethanol and intracellularly stained with anti-human Ki-67 (clone Ki-67) Spark PLUS UV395™ (left) or mouse IgG1, κ Spark PLUS UV395™ isotype control (right). Data shown is gated on the lymphocyte population.

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