Alexa Fluor® 488 anti-BrdU Antibody

Catalog# / Size	364105 / 25 tests 364106 / 100 tests
Clone	3D4
Regulatory Status	RUO
Other Names	5-bromodeoxyuridine, bromodeoxyuridine
Isotype	Mouse IgG1, κ
Description	BrdU is a uridine derivative and a structural analog of thymidine, which can be incorporated into DNA during the S-phase of a cell cycle as a substitute for thymidine. Cells can be pulse-labeled with BrdU and analyzed with antibodies against BrdU to determine the proportion of cells in the S-phase of the cell cycle during a given interval.

Product Details

Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Iodouridine-conjugated ovalbumin
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 Alexa Fluor® 488 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
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 IHC - Reported in the literature, not verified in house
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 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. * Alexa Fluor® 488 has a maximum emission of 519 nm when it is excited at 488 nm. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Blue Laser (488 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunohistochemistry and fluorescence microscopy.
Application References	1. Dolbeare F, *et al.* 1983. *Proc. Natl. Acad. Sci. USA* 80:5573. 2. Hirota K, *et al.* 2007. *J. Exp. Med.* 204:41. 3. Godebu E, *et al.* 2008. *J. Immunol.* 181:1798. 4. Waskow C, *et al.* 2008. *Nat. Immunol.* 9:676.
Product Citations	1. Berges C, *et al.* 2015. J Leukoc Biol. 98: 1091 - 1105. PubMed 2. Kaymak A, *et al.* 2018. Oncotarget. 9:28666. PubMed 3. Lin JR *et al.* 2018. eLife. 7 pii: e31657. PubMed 4. Li H *et al.* 2019. Developmental cell. 49(1):118-129 . PubMed 5. Davenne T, *et al.* 2020. Cell Rep. 31:107640. PubMed

RRID	AB_2564499 (BioLegend Cat. No. 364105) AB_2564500 (BioLegend Cat. No. 364106)

Antigen Details

Structure	Uridine derivative that can be incorporated into DNA and substitute thymidine residues.
Distribution	Cells can be pulse-labeled with BrdU, which will be incorporated into DNA during the cell cycle's synthesis phase.
Function	The antibody against BrdU can be used to identify cells undergoing DNA replication during the BrdU incorporation period.
Biology Area	Cell Biology, Cell Cycle/DNA Replication, Immunology
Molecular Family	Nuclear Markers
Antigen References	1. Barker JM, *et al.* 2013. *PLoS One* 8:e63692. 2. Duque A and Rakic P. 2011. *J. Neurosci.* 31:15205. 3. Robbins S, *et al.* 2011. *J. Vis. Exp.* 55:2855. 4. Broekhuizen CA, *et al.* 2010. *Infect Immun.* 78:954. 5. van der Wath RC, *et al.* 2009. *PLoS One* 4:e6972. 6. Dolbeare F, *et al.* 1985. *Cytometry* 6:521. 7. Gratzner HG. 1982. *Science* 218:474.
Gene ID	NA

Related Protocols

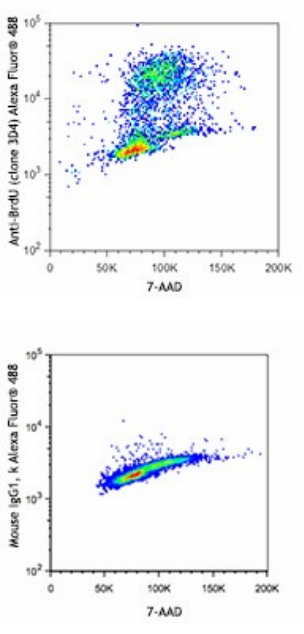
Anti-BrdU Staining Using 70% Ethanol and 2N HCL

Anti-BrdU Staining Using DNAse with Surface and Fluorescent Proteins

Other Formats

Purified anti-BrdU, Alexa Fluor® 488 anti-BrdU, FITC anti-BrdU, Alexa Fluor® 647 anti-BrdU, PerCP/Cyanine5.5 anti-BrdU, Phase-Flow™ FITC BrdU Kit, Phase-Flow™ Alexa Fluor® 647 BrdU Kit, PE anti-BrdU, Alexa Fluor® 700 anti-BrdU, APC anti-BrdU, PE/Cyanine7 anti-BrdU

Product Data



Human T lymphoblastic leukemia cell line, Hut-78, was pulsed with BrdU for one hour, fixed and permeabilized with cold 70% ethanol, and then stained with anti-BrdU (clone 3D4) Alexa Fluor® 488 (top) or mouse IgG1, κ Alexa Fluor® 488 isotype control (bottom).

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