

Alexa Fluor® 647 Anti-Ki67 antibody [B56] ab283699

Recombinant

4 Images

Overview

Product name	Alexa Fluor® 647 Anti-Ki67 antibody [B56]
Description	Alexa Fluor® 647 Mouse monoclonal [B56] to Ki67
Host species	Mouse
Conjugation	Alexa Fluor® 647. Ex: 652nm, Em: 668nm
Tested applications	Suitable for: ICC/IF, Flow Cyt (Intra)
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	ICC/IF: HeLa (human cervix adenocarcinoma epithelial cells) Flow Cyt: HeLa (Human cervix adenocarcinoma epithelial cells).
General notes	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: (i) in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@thermofisher.com.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. Store In the Dark.
Storage buffer	pH: 7.20 Preservative: 0.02% Sodium azide Constituents: 30% Glycerol (glycerin, glycerine), 1% BSA, 68% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	B56
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab283699 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		1/500.
Flow Cyt (Intra)		1/5000.

Target

Function	Required to maintain individual mitotic chromosomes dispersed in the cytoplasm following nuclear envelope disassembly (PubMed:27362226). Associates with the surface of the mitotic chromosome, the perichromosomal layer, and covers a substantial fraction of the chromosome surface (PubMed:27362226). Prevents chromosomes from collapsing into a single chromatin mass by forming a steric and electrostatic charge barrier: the protein has a high net electrical charge and acts as a surfactant, dispersing chromosomes and enabling independent chromosome motility (PubMed:27362226). Binds DNA, with a preference for supercoiled DNA and AT-rich DNA (PubMed:10878551). Does not contribute to the internal structure of mitotic chromosomes (By similarity). May play a role in chromatin organization (PubMed:24867636). It is however unclear whether it plays a direct role in chromatin organization or whether it is an indirect consequence of its function in maintaining mitotic chromosomes dispersed.
Sequence similarities	Contains 1 FHA domain. Contains 16 K167R repeats. Contains 1 PP1-binding domain.
Developmental stage	Expression occurs preferentially during late G1, S, G2 and M phases of the cell cycle, while in cells in G0 phase the antigen cannot be detected (at protein level) (PubMed:6206131). Present at highest level in G2 phase and during mitosis (at protein level). In interphase, forms fiber-like structures in fibrillarin-deficient regions surrounding nucleoli (PubMed:2674163, PubMed:8799815).
Post-translational	Phosphorylated. Hyperphosphorylated in mitosis (PubMed:10502411, PubMed:10653604).

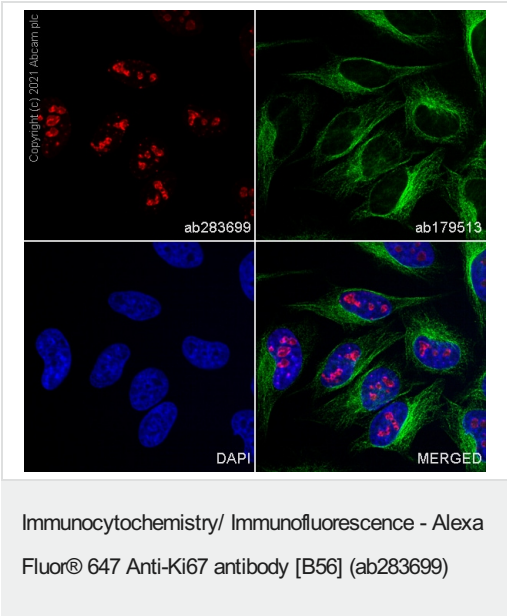
modifications

Cellular localization

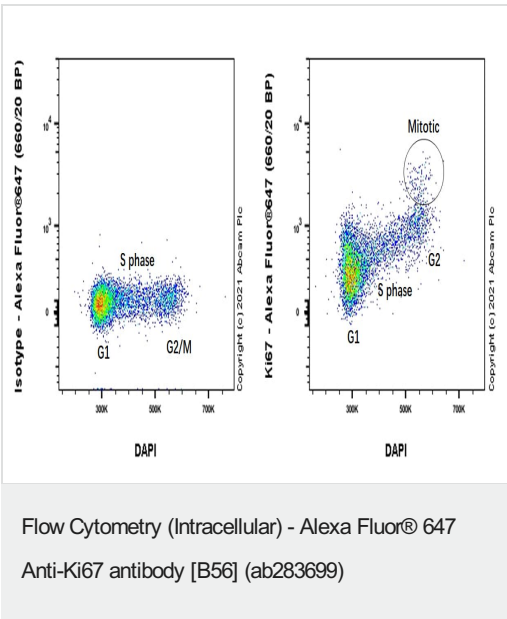
Hyperphosphorylated form does not bind DNA.

Chromosome. Nucleus. Nucleus, nucleolus. Associates with the surface of the mitotic chromosome, the perichromosomal layer, and covers a substantial fraction of the mitotic chromosome surface (PubMed:27362226). Associates with satellite DNA in G1 phase (PubMed:9510506). Binds tightly to chromatin in interphase, chromatin-binding decreases in mitosis when it associates with the surface of the condensed chromosomes (PubMed:15896774, PubMed:22002106). Predominantly localized in the G1 phase in the perinucleolar region, in the later phases it is also detected throughout the nuclear interior, being predominantly localized in the nuclear matrix (PubMed:22002106).

Images

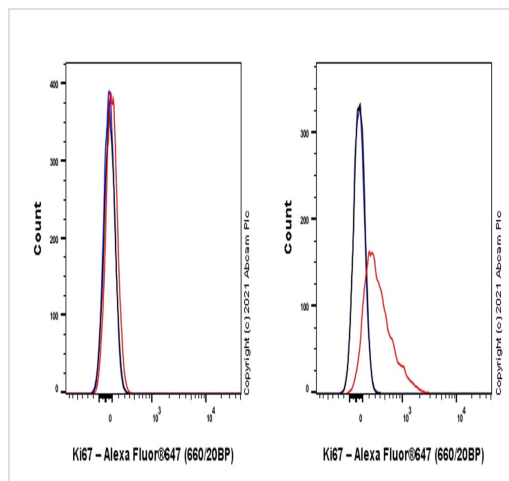


Immunofluorescent analysis of 4% Paraformaldehyde HeLa (human cervix adenocarcinoma epithelial cells) labelling Ki67 with ab283699 at 1/500 dilution, (Red). Confocal image showing nucleolar staining on HeLa cells. **ab179513** Anti-beta Tubulin rabbit monoclonal antibody - Microtubule Marker was used to counterstain tubulin at 1/200 dilution. **ab150081** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was used as the counterstain secondary antibody at 1/1000 (Green). The nuclear counterstain was DAPI (Blue).



Intracellular Flow cytometric scatterplot showing 4% paraformaldehyde fixed HeLa (Human cervix adenocarcinoma epithelial cells) permeabilized with 90% methanol labelling Ki67 with ab283699 at 1/5000 dilution (Red). Mouse monoclonal IgG (Left)

Cells were co-stained with DAPI to differentiate cell cycle phase.



Flow Cytometry (Intracellular) - Alexa Fluor® 647
Anti-Ki67 antibody [B56] (ab283699)

Intracellular Flow cytometric overlay histogram showing 4% paraformaldehyde fixed HeLa (Human cervix adenocarcinoma epithelial cells (Right)) permeabilized with 90% methanol labelling Ki67 with ab283699 at 1/5000 dilution (Red). MKI67 KO HeLa (Left). Isotype control was Mouse monoclonal IgG (Black). Unlabelled control: Cells without incubation with primary antibody and secondary antibody (Blue).

Positive staining on HeLa cells ([ab255448](#)), while no staining on Ki67 knockout HeLa cells ([ab255407](#)).

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

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(ab283699)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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