Product datasheet

Anti-Ki67 antibody [B126.1] ab8191

Overview

Product name: Anti-Ki67 antibody [B126.1]
Description: Mouse monoclonal [B126.1] to Ki67
Host species: Mouse
Tested applications: Suitable for: Flow Cyt, IHC-Fr, IHC-P, ICC/IF
Species reactivity: Reacts with: Human, Common marmoset
Immunogen: Other Immunogen Type corresponding to Human Ki67. Raised against nuclear fractions of human tumor cell line

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer: Preservative: 0.1% Sodium azide
Constituent: PBS
Purity: Protein G purified
Clonality: Monoclonal
Clone number: B126.1
Isotype: IgG1
Light chain type: kappa

Applications

Our Abpromise guarantee covers the use of ab8191 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
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<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Flow Cyt</td>
<td>ab170190</td>
<td>Use at an assay dependent concentration. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.</td>
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</table>
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 modifications

Cellular localization
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).

Target

Function
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Images
ab8191 staining Ki67 in Marmoset colon tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 1% BSA for 10 minutes at 21°C; antigen retrieval was by heat mediation in citrate acid. Samples were incubated with primary antibody (1/50 in TBS/BSA/azide) for 2 hours at 21°C. A Biotin-conjugated Goat anti-mouse IgG polyclonal (1/300) was used as the secondary antibody.

IHC-P image of ab8191 (1/50) staining human melanoma tumour sections. Secondary antibody: anti-mouse HRP (ab6728).
ab8191 at 1/100 staining normal human primary fibroblasts by ICC/IF. The cells were formaldehyde fixed, permeabilized and fixed before incubation with the antibody for 2 hours at 4°C. An Alexa Fluor® 488 conjugated donkey polyclonal was used as the secondary.

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