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# DATASHEET

Anti-Ki-67 antibody ValidAb™

## Product overview

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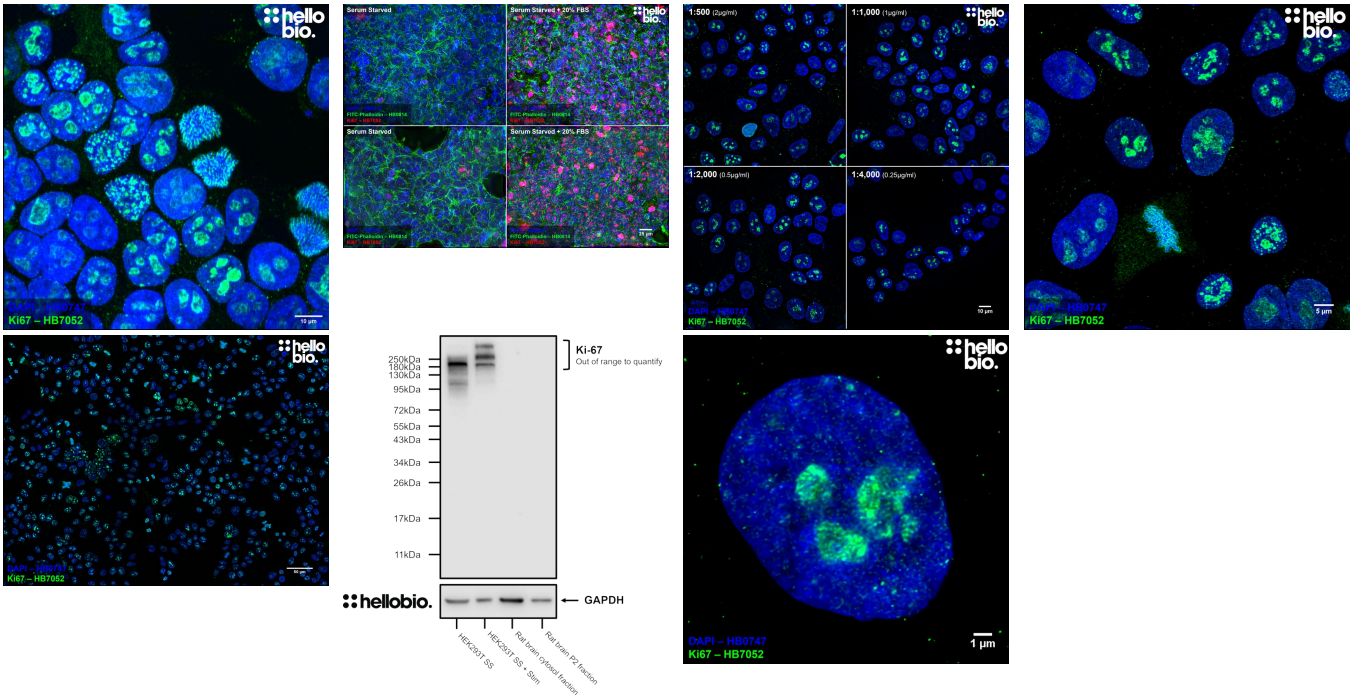
| **Name** | Anti-Ki-67 antibody ValidAb™ |
| **Cat No** | HB7052 |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Target** | Ki-67 |
| **Description** | Antibody to Ki-67 - a widely used marker of proliferating cells. Part of the ValidAb™ range of highly validated, data-rich antibodies. |

## Validation data




## Product information

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| **Immunogen** | Nuclei derived from the L428 Hodgkin Lymphoma cell line |
| **Clone number** | Ki-67 |
| **Isotype** | IgG1 |
| **Purification** | Protein A affinity chromatography |
| **Concentration** | 1mg/ml |
| **Formulation** | Lyophilised. When reconstituted contains PBS with 15mM sodium azide and 1% recombinant albumin |
| **Predicted species reactivity** | Human, Cow |
| **Tested species reactivity** | Human |

## Tested applications

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| **Applications** | ICC, WB |
| **Western blot optimal concentration** | 2µg/ml (1:500 dilution) as tested in cultured HEK293T cells. |
| **ICC optimal concentration** | 0.5µg/ml (1:2,000 dilution) as tested in cultured HEK293T cells. |
| **Positive control** | All proliferating cells express Ki-67. An easy positive control is using any standard cell line under normal culturing conditions. |
| **Negative control** | Cells in $G_0$ do not express Ki-67. An easy negative control is to serum starve cells by growing in serum free media to arrest the cell cycle and inhibit Ki-67 expression. |
| **Open data link** | Please follow this link to OSF |

## Target information

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| **Other names** | Proliferation marker protein Ki-67, Antigen identified by monoclonal antibody Ki-67, MKI67 |
| **UniProt ID** | P46013 |
| **Gene name** | MKI67 |
| **NCBI full gene name** | marker of proliferation Ki-67 |
| **Entrez gene ID** | 4288 |
| **Amino acids** | 3,256 (358.7kDa) |
| **Isoforms** | Ki-67 has two isoforms produced by differential splicing:<br>• Long - 3,256 amino acids (358.7kDa)<br>• Short - 2,896 amino acids (319.4kDa) - missing residues 136-495 |
| **Expression** | Ki-67 is found in all proliferating cells. |
| **Subcellular expression** | Ki-67 is expressed in the nucleus where its localisation changes by cell cycle phase but is predominantly found in association with DNA. |
| **Processing** | Ki-67 is not subject to any processing to form the active conformation. |
| **Post translational modifications** | Ki-67 is subject to phosphorylation on many of its serine, threonine and tyrosine residues alongside forming cross-links with SUMO1 and SUMO2 at multiple residues. |
| **Homology (compared to human)** | Mouse and rat Ki-67 show low homology with human Ki-67 with homology scores of 42.7% and 43.4% homology respectively. Due to this low homology HB7052 does not react with mouse and rat Ki-67. |
| **Similar proteins** | There are no proteins with significant homology to Ki-67 |

## Storage & Handling

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| **Storage instructions** | -20°C |
| **Important** | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use |

## References


### Ki-67 gene expression.

Uxa S et al (2021) Cell death and differentiation 28
**PubMedID** 34183782

### Ki-67: more than a proliferation marker.

Sun X et al (2018) Chromosoma 127
**PubMedID** 29322240

### The Ki-67 protein: from the known and the unknown.

Scholzen T et al (2000) Journal of cellular physiology 182
**PubMedID** 10653597

### Ki67 is a promising molecular target in the diagnosis of cancer (review).

Li LT et al (2015) Molecular medicine reports 11
**PubMedID** 25384676

### Ki-67 protein as a tumour proliferation marker.

Menon SS et al (2019) Clinica chimica acta; international journal of clinical chemistry 491
**PubMedID** 30653951