



Qty: 100 µg
Mouse anti-
Ki-67-(FITC)
Catalog No. 33-4711
Lot No.

Mouse anti-Ki-67-(FITC)

FORM

This antibody cocktail is supplied as a 200 µl aliquot at an antibody concentration of 0.5 mg/ml in 50% glycerol, phosphate buffered saline (pH 7.4) containing 1% BSA, and 0.1% sodium azide as a preservative. The antibody is Protein A-purified from mouse ascites before conjugation to fluorescein isothiocyanate.

CLONE: 7B11 **ISOTYPE:** IgG_{1,k} **FLUOROCHROME/ANTIBODY RATIO:**

IMMUNOGEN

Synthetic peptide corresponding to a carboxy terminal portion of human Ki-67 protein.

SPECIFICITY

This antibody reacts with the Ki-67 nuclear antigen. On Western blots clone 7B11 specifically detects proteins migrating at approximately 395 and 345 kDa, corresponding to the two known Ki-67 splice variants. The epitope recognized by antibody 7B11 is judged similar to that recognized by the Ki-67 monoclonal antibody MIB-1: the binding of 7B11 and MIB-1 to Ki-67 protein are both inhibited by the 7B11 immunizing peptide.

REACTIVITY

Reactivity of this antibody with human Ki-67 has been confirmed using K562 erythroleukemia cells, HeLa cells, and breast carcinoma. Reactivity with Ki-67 homologies from other species has not been tested.

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. We recommend the following ranges as starting points for this product.

Immunofluorescence: 2 µg/ml
Immunohistochemistry (paraffin): use unconjugated clone 7B11 (cat. no. 18--0192 or polyclonal Rb x Ki-67 (cat. no. 18-0191).

The suitability of this antibody for applications other than those mentioned here has not been evaluated.

STORAGE

Store at 2-8°C.

BACKGROUND⁽¹⁻³⁾

Ki-67 is a large (~350 kDa) cell-cycle associated non-histone protein that is strictly associated with, and apparently required, for cell proliferation. Expression of Ki-67 is often used to assess the proliferating fraction of cells within populations of both benign and malignant cells and tissues including malignant melanoma, breast carcinoma, and malignant Non-Hodgkin lymphoma. Ki-67 protein is not detected in cells in the G₀ phase of the cell cycle but increases steadily from G₁ through mitosis. Ki-67 accumulation starts during late G₁, localized in small granules throughout the nucleus. During S and G₂, larger foci overlapping with nucleoli and heterochromatic regions are observed. At the onset of mitosis, Ki-67 is redistributed to become associated with the surface of condensed chromosomes. The paucity of Ki-67 in G₁ interphase cells suggests a possible chromatin-associated function.

Located on human chromosome ten, the Ki-67 gene is comprised of 15 exons, including a large 6845 bp exon containing several repeated elements including 10 ProGluSerThr (PEST) motifs. PEST motifs are associated with high turnover proteins such as other cell cycle-related proteins, oncogenes and transcription factors.

(cont'd)

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PI 334711

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REFERENCES

1. Gerdes J., Ki-67 and other proliferation markers useful for immunohistological diagnostic and prognostic evaluations in human malignancies. *Semin Cancer Biol* 1(3):199-206 (1990).
2. Schluter C, et al., The cell proliferation-associated antigen of antibody Ki-67: a very large, ubiquitous nuclear protein with numerous repeated elements, representing a new kind of cell cycle-maintaining proteins. *J Cell Biol* 123(3):513-22 (1993)
3. Starborg M, et al., The murine Ki-67 cell proliferation antigen accumulates in the nucleolar and heterochromatic regions of interphase cells and at the periphery of the mitotic chromosomes in a process essential for cell cycle progression. *J Cell Sci*, 109 (Pt 1):143-53 (1996).

CELL CYCLE RELATED PRODUCTS

Name	Clone	Cat. No.
Ms x PCNA	PC10	13-3900
Ms x PCNA-Biotin	PC11	13-3940
PCNA Staining Kit	for 50 slides	93-1143
BrdU Labeling Reagent	reagent	00-0103
BrdU Staining Kit	for 50 slides	93-3943
BrdU Staining Kit	for 250 slides	93-3944
Ms x CUL1	2H4C9	32-2400
Rb x CUL2 (C-term)	Poly-CT2	51-1800
Rb x CUL2 (N-term)	Poly-NCT	51-2000

Ms x CDK7 (CAK, M015)	MO-1.1	13-8700
Ms x Coilin	H1	33-9500
Ms x Cyclin A (MAB1)	E67	33-4800
Ms x Cyclin A (MAB2)	E23	33-4900
Ms x Cyclin D1	DI-72-13G	13-4500
Ms x Cyclin D1	AM-29	33-3500
Ms x Cyclin D1	AM-69	33-3600
Rt x Cyclin D1	D1-17A6-4	13-5600
Rt x Cyclin D2	D2-34B1-3	13-4600
Rt x Cyclin D3	D3-18BG-10	13-4700

Ms x Cyclin E	HE172	32-1500
Ms x Cyclin E	HE12	32-1600
Rb x GADD45	Poly Z-FR45	71-3900
Rb x NEK3	---	71-5700
Rb x NEK2	---	71-3700
Ms x c-Myc	9E10	13-2500

Name	Clone	Cat. No.
Ms x c-Myc-FITC	9E10	13-2511
Ms x N-Myc	NMYC-1	33-1900
Rb x p14 ARF	Poly ZF14	71-8100
Rb x p16 INK4a	---	71-3200
Rb x p19 SKP1	Poly G19	71-9700
Rb x p19 SKP1	Poly PC19	71-9800
Ms x p21 Cip1/WAF1	EA10	33-7000
Rb x p21 Cip1/WAF1	Poly	71-1000
Rb x phospho-p27 Kip1	Poly -PT187	71-7700

Rb x p27 Kip1	Poly-FP1	71-9600
Ms x p27 Kip1	p27-11D11	33-2800
Ms x p34 cdc2	A17	33-1800
Rb x p45 Skp2	Poly-GP45	51-1900
Ms x p53	PAb1801	13-4000
Ms x p53 -Sephacrose	Pab1801	13-4041
Ms x p53	BP53-12	13-2200
Ms x p53	PAb240	13-4100
Ms x PLK (cocktail)	PL2, PL6	33-1700
Rb x PLK	Poly	71-2100

Ms x Retinoblastoma	Rb1 (1F8)	13-4200
Ms x hTOR	26E3	33-8100
Rb x UBC3	Poly-HC34	71-9900
Ms x UBC3	2E3B5	32-2000
Rb x Wee1	Poly-XCT	51-1700

ANTIBODY DETECTION REAGENTS

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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