Ki67/MKI67 Protein, Human (GST)

Cat. No.:	HY-P72508
Synonyms:	Antigen KI-67; Ki-67; KIA; MIB-1; MKI67; Proliferation Marker Protein Ki-67
Species:	Human
Source:	E. coli
Accession:	P46013 (M1-P120)
Gene ID:	4288
Molecular Weight:	approximately 36.91 kDa

PROPERTIES

AA Sequence	M W P T R R L V T I K R S G V D G P H F P L S L S T C L F G R G I E C D I R I Q L P V V S K Q H C K I E I H E Q E A I L H N F S S T N P T Q V N G S V I D E P V R L K H G D V I T I I D R S F R Y E N E S L Q N G R K S T E F P R K I R E Q E P
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The Ki67/MKI67 protein is essential for maintaining the dispersion of individual mitotic chromosomes in the cytoplasm following nuclear envelope disassembly. Positioned on the surface of the mitotic chromosome, specifically within the perichromosomal layer, Ki67/MKI67 covers a significant fraction of the chromosome surface, preventing the collapse of chromosomes into a singular chromatin mass. Functioning as a surfactant with a high net electrical charge, it establishes a steric and electrostatic charge barrier, facilitating independent chromosome motility. Ki67/MKI67 exhibits DNA-binding capabilities, displaying a preference for supercoiled DNA and AT-rich DNA. While it does not contribute to the internal structure of mitotic chromosomes, its role in chromatin organization remains uncertain, raising the possibility that this may be an indirect consequence of its primary function in maintaining dispersed mitotic chromosomes. The protein interacts with various partners, including KIF15, NIFK, PPP1CC, and forms part of a complex involving ZNF335, HCFC1, CCAR2, EMSY,

	RBBP5, ASH2L, and WDR5, suggesting its involvement in intricate cellular processes and molecular networks.

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