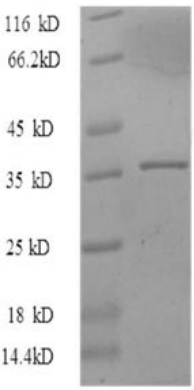
Recombinant Human Proliferation marker protein Ki-67 (MKI67), partial

Product Code	CSB-EP014597HU(A6)
Relevance	Thought to be required for maintaining cell proliferation.
Abbreviation	Recombinant Human MKI67 protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P46013
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	VLRAPKVEPVGDVVSTRDPVKSQSKSNTSLPPLPFKRGGGKDGSVTGTKRLR CMPAPEEIVEELPASKKQRVAPRARGKSSEPVVIMKRSLRTSAKRIEPAEELNS NDMKTNKEEHKLQDSVPENKGISLRSRRQNKTEAEQQITEVFVLAERIEINRNE KKPMKTSPEMDIQNPDDGARKPIPRDKVTENKRCLRSARQNESSQPKVAEES GGQKSAKVLMQNQKGKGEAGNSDSMCLRSRKTKSQPAASTLESKSVQRVTR SVKRCAENPKKAEDNVCVKKIRTRSHRDSE
Research Area	Cell Cycle
Source	E.coli
Target Names	MKI67
Expression Region	2962-3254aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	36.7kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Human Proliferation marker protein Ki-67 (MKI67) is produced in E. coli and includes an N-terminal 6xHis-tag for easier purification. This partial protein spans amino acids 2962-3254 and comes with purity levels above 90% as confirmed by SDS-PAGE. The product is intended for research use only and supports studies that need high-quality protein with minimal endotoxin content.

Ki-67 stands as a well-studied proliferation marker that researchers have examined extensively in cell biology. Understanding cellular processes like cell cycle progression appears to depend heavily on this protein, and scientists frequently turn to it for cell proliferation research. When cells actively divide, Ki-67 typically shows up, which likely explains why it has become such an important tool in cancer research and diagnostic work.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Antibody Development and Validation

This particular Ki-67 fragment (amino acids 2962-3254) may work well as an immunogen or antigen when developing and testing antibodies that target this specific protein region. The N-terminal 6xHis tag makes purification and immobilization straightforward for ELISA-based antibody screening and validation work. Scientists can test how specific their antibodies are and check for cross-reactivity using Western blot and immunoassay methods. The protein's >90% purity should generate strong immune responses during antibody production.

2. Protein-Protein Interaction Studies

Pull-down assays can take advantage of this His-tagged Ki-67 fragment to find potential binding partners that interact with Ki-67's C-terminal region. The 6xHis tag allows for attachment to nickel-based affinity matrices, which helps researchers pull out interacting proteins from cell lysates or purified protein

collections. This approach seems particularly useful for mapping how Ki-67's C-terminal domain connects with other proteins and understanding what role it plays in cellular functions. The specific amino acid stretch from 2962-3254 represents a defined functional domain that might have its own unique binding characteristics.

3. Biochemical Characterization and Biophysical Analysis

Detailed biochemical studies can make use of this recombinant fragment, including size exclusion chromatography, dynamic light scattering, and thermal stability testing. The protein's high purity (>90%) and known amino acid sequence make it well-suited for determining the biophysical properties of this Ki-67 domain. Scientists might investigate how the protein forms complexes with itself, how stable it remains under heat, and how it behaves in different buffer solutions. Such studies could reveal important details about the structural features and stability of this particular Ki-67 region.

4. ELISA Development and Immunoassay Applications

The combination of the N-terminal His tag and high purity makes this Ki-67 fragment a strong candidate for creating sandwich or competitive ELISA assays. Researchers can easily attach the protein to nickel-coated plates or capture it with anti-His antibodies during assay setup. This recombinant fragment may serve as a standard or control in immunoassays designed to detect Ki-67 or measure its expression in research samples. The specific amino acid region (2962-3254) opens up possibilities for developing detection methods that focus specifically on this domain of Ki-67.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.