

DNA Replication Antibody Sampler Kit

Cat# AK0147

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

PRODUCT DESCRIPTION

The initiation of DNA replication in mammalian cells is a highly coordinated process that is regulated by several protein complexes. Origins of replication (ORCs), at which replication is initiated, are dispersed throughout the genome. Their activities are regulated via the sequential binding of pre-replication and replication factors that initiate formation of replication forks, the active structures at which DNA is synthesized. The origin recognition complex is thought to be bound to chromatin throughout the cell cycle. The pre-replication complex (Pre-RC) forms in late mitosis/early G1 phase beginning with the binding of CDT1 and CDC6 to the origin. Together CDT1 and CDC6 promote the loading of the heterohexameric minichromosome maintenance (MCM) complex. This process is referred to as chromatin licensing. Licensing of the chromatin permits the DNA to replicate only once per cell cycle, helping to ensure that genetic alterations and malignant cell growth do not occur. The canonical MCM complex proteins (MCM2-7) are a family of six related phospho-proteins that function, in part, as the eukaryotic replicative DNA helicase. Phosphorylation and ubiquitination of the MCM2, MCM3, MCM4, and MCM6 subunits appears to regulate MCM complex activity and the initiation of DNA synthesis. MCM proteins are removed during DNA replication, causing chromatin to become unlicensed, inhibiting Pre-RC reformation. In addition to DNA polymerase, initiation of DNA replication requires a pair of primase subunits. DNA Primase activity catalyzes de novo synthesis of an RNA/DNA primer (initiator DNA) on the leading and lagging strands, while polymerase activity extends the initiator DNA. The 48 and 58 kDa primase subunits cooperate in the synthesis of small RNA primers. p48 is the catalytically active subunit, while p58 couples p48 to the polymerase to allow the transfer of primers to the active site. The p58 subunit may also play a role in regulation of primer length. Once replication is initiated, Proliferating Cell Nuclear Antigen (P

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340450	BM28 Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human, Mouse	Rabbit
A340713	MCM3 Polyclonal Antibody	20µL	WB, ELISA	Human	Rabbit
A340401	MCM7 Polyclonal Antibody	20µL	WB, ELISA	Human, Mouse, Rat	Rabbit

A340742	PCNA Polyclonal Antibody	20μL	WB, IHC	Human, Mouse, Rat	Rabbit
A1013s	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120μL	WB, ELISA	Rabbit	Goat

PRODUCT USE LIMITATION

These products are intended for research use only.