

Cell Cycle/Checkpoint Antibody Sampler Kit

Cat# AK0201

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

PRODUCT DESCRIPTION

The cell division cycle demands accuracy to avoid the accumulation of genetic damage. This process is controlled by molecular circuits called "checkpoints" that are common to all eukaryotic cells. Checkpoints monitor DNA integrity and cell growth prior to replication and division at the G1/S and G2/M transitions, respectively. The cdc2-cyclin B kinase is pivotal in regulating the G2/M transition. Cdc2 is phosphorylated at Thr14 and Tyr15 during G2-phase by the kinases Wee1 and Myt1, rendering it inactive. The tumor suppressor protein retinoblastoma (Rb) controls progression through the late G1 restriction point (R) and is a major regulator of the G1/S transition. During early and mid G1-phase, Rb binds to and represses the transcription factor E2F. The phosphorylation of Rb late in G1-phase by CDKs induces Rb to dissociate from E2F, permitting the transcription of S-phase-promoting genes. In vitro, Rb can be phosphorylated at multiple sites by cdc2, cdk2, and cdk4/6. DNA damage triggers both the G2/M and the G1/S checkpoints. DNA damage activates the DNA-PK/ATM/ATR kinases, which phosphorylate Chk at Ser345, Chk2 at Thr68 and p53. The Chk kinases inactivate cdc25 via phosphorylation at Ser216, blocking the activation of cdc2.

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340205	Phospho-CDK1 (Tyr15) Polyclonal Antibody	20µL	WB, ELISA	Human, Mouse, Rat, Monkey	Rabbit
A340208	Phospho-CHEK2 (Thr68) Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340284	Phospho-RB1 (Ser807) Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340264	Phospho-P53 (Ser15) Polyclonal Antibody	20µL	WB, IHC, IF, IP, ELISA	Human, 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.