

## ATR (Phospho Ser428) Rabbit pAb

CatalogNo: YP1074

### Key Features

#### Host Species

- Rabbit

#### Reactivity

- Human, Mouse, Rat

#### Applications

- IHC, IF, ELISA

#### MW

- 301kD (Calculated)

#### Isotype

- IgG

### Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

### Recommended Dilution Ratios

**IHC 1:100-1:300**

**ELISA 1:40000**

**IF 1:50-200**

### Basic Information

**Clonality** Polyclonal

### Immunogen Information

**Immunogen** The antiserum was produced against synthesized peptide derived from human ATR around the phosphorylation site of Ser428. AA range: 394-443

**Specificity** Phospho-ATR (S428) Polyclonal Antibody detects endogenous levels of ATR protein only when phosphorylated at S428. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites): GlSPK

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## | Target Information

**Gene name** ATR

**Protein Name** Serine/threonine-protein kinase ATR

Organism	Gene ID	UniProt ID
Human	<a href="#">545;</a>	<a href="#">Q13535;</a>
Mouse		<a href="#">Q9JJK8;</a>

**Cellular Localization** Nucleus . Chromosome . Depending on the cell type, it can also be found in PML nuclear bodies. Recruited to chromatin during S-phase. Redistributes to discrete nuclear foci upon DNA damage, hypoxia or replication fork stalling.

**Tissue specificity** Ubiquitous, with highest expression in testis. Isoform 2 is found in pancreas, placenta and liver but not in heart, testis and ovary.

**Function** Catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Manganese.,Disease:Defects in ATR are a cause of Seckel syndrome type 1 (SCKL1) [MIM:210600]. SCKL1 is a rare autosomal recessive disorder characterized by growth retardation, microcephaly with mental retardation, and a characteristic 'bird-headed' facial appearance.,enzyme regulation:Activated by DNA and inhibited by BCR-ABL oncogene. Slightly activated by ATRIP. Inhibited by caffeine, wortmannin and LY294002.,Function:Serine/threonine protein kinase which activates checkpoint signaling upon genotoxic stresses such as ionizing radiation (IR), ultraviolet light (UV), or DNA replication stalling, thereby acting as a DNA damage sensor. Recognizes the substrate consensus sequence [ST]-Q. Phosphorylates BRCA1, CHEK1, MCM2, RAD17, RPA2, SMC1 and TP53/p53, which collectively inhibit DNA replication and mitosis and promote DNA repair, recombination and apoptosis. Phosphorylates 'Ser-139' of histone variant H2AX/H2AFX at sites of DNA damage, thereby regulating DNA damage response mechanism. Required for FANCD2 ubiquitination. Critical for maintenance of fragile site stability and efficient regulation of centrosome duplication.,PTM:Phosphorylated; autophosphorylates in vitro.,similarity:Belongs to the PI3/PI4-kinase family. ATM subfamily.,similarity:Contains 1 FAT domain.,similarity:Contains 1 FATC domain.,similarity:Contains 1 PI3K/PI4K domain.,similarity:Contains 2 HEAT repeats.,subcellular location:Depending on the cell type, it can also be found in PML nuclear bodies. Recruited to chromatin during S-phase. Redistributes to discrete nuclear foci upon DNA damage, hypoxia or replication fork stalling.,subunit:Forms an heterodimer with ATRIP. Binds to DNA, and to UV-damaged DNA with higher affinity. Interacts with RAD17, MSH2 and HDAC2. Present in a complex containing ATRIP and RPA-coated single-stranded DNA. Present in a complex containing CHD4 and HDAC2. Interacts with BCR-ABL after genotoxic stress. Interacts with EEF1E1. This interaction is enhanced by UV irradiation. Interacts with CLSPN and CEP164.,tissue specificity:Ubiquitous, with highest expression in testis. Isoform 2 is found in pancreas, placenta and liver but not in heart, testis and ovary.,

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## | Validation Data

## | Contact information

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Please scan the QR code to access additional product information:  
**ATR (Phospho Ser428) Rabbit pAb**

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