

ATR (Phospho Thr1989) Rabbit pAb

CatalogNo: YP1269

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB

MW

- 300kD (Observed)

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

WB 1:1000-2000

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen Synthesized phospho peptide around human ATR (Thr1989)

Specificity This antibody detects endogenous levels of Human ATR (phospho-Thr1989)

Target Information

Gene name ATR FRP1

Protein Name ATR (Thr1989)

Organism	Gene ID	UniProt ID
Human	545 ;	Q13535 ;
Mouse		Q9JJK8 ;

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. ,

| Validation Data

| Contact information

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Thr1989) Rabbit
pAb**

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