

ATR (Phospho Ser428) (PT1243R) PT™ Rabbit mAb

CatalogNo: YM9085 **Recombinant** 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB, IHC, IF, ELISA

MW

- 301kD (Calculated)
290kD (Observed)

Isotype

- IgG, Kappa

Storage

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

Formulation PBS, 50% glycerol, 0.05% Proclin 300, 0.05% BSA

Recommended Dilution Ratios

IHC 1:200-1:1000

WB 1:500-1:2000

IF 1:200-1:1000

ELISA 1:5000-1:20000

Basic Information

Clonality Monoclonal

Clone Number PT1243R

Immunogen Information

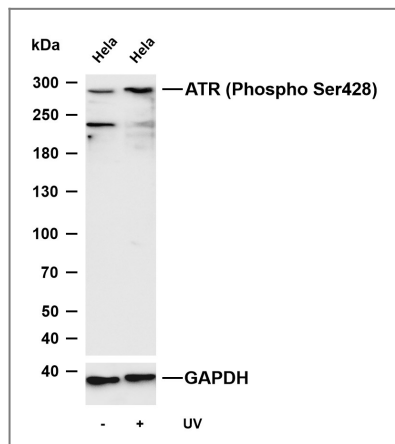
Immunogen The specific immunogen used to produce this antibody is proprietary information.

Specificity ATR (Phospho Ser428) 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 When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports.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

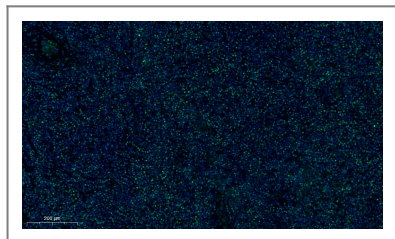
Target Information

Gene name	ATR		
Protein Name	Serine/threonine-protein kinase ATR		
	Organism	Gene ID	UniProt ID
	Human	545;	Q13535;
	Mouse		Q9JKK8;
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



Various whole cell lysates were separated by 4-8% SDS-PAGE, and the membrane was blotted with anti-ATR (Phospho Ser428) (PT1243R) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: HeLa Lane 2: HeLa treated with UV for 1 hour, then recovered for 1 hour Predicted band size: 301kDa Observed band size: 290kDa



Immunofluorescence analysis of human testis. 1,primary antibody(green) was diluted at 1:200(4°C,overnight). 2, AF488(catalog: RS3211) labeled Secondary antibody was diluted at 1:300(room temperature, 50min).

Contact information

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ATR (Phospho Ser428) (PT1243R) PT™ Rabbit mAb

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