

**ATR (phospho Ser428) Polyclonal Antibody**

<b>Catalog No :</b>	YP1074
<b>Reactivity :</b>	Human;Rat;Mouse;
<b>Applications :</b>	IHC;IF;ELISA
<b>Target :</b>	ATR
<b>Fields :</b>	>>Fanconi anemia pathway;>>Cell cycle;>>p53 signaling pathway;>>Cellular senescence;>>Human papillomavirus infection;>>Human T-cell leukemia virus 1 infection;>>Human immunodeficiency virus 1 infection
<b>Gene Name :</b>	ATR
<b>Protein Name :</b>	Serine/threonine-protein kinase ATR
<b>Human Gene Id :</b>	545
<b>Human Swiss Prot No :</b>	Q13535
<b>Mouse Swiss Prot No :</b>	Q9JKK8
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human ATR around the phosphorylation site of Ser428. AA range:394-443
<b>Specificity :</b>	Phospho-ATR (S428) Polyclonal Antibody detects endogenous levels of ATR protein only when phosphorylated at S428.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	IHC 1:100 - 1:300. ELISA: 1:40000.. IF 1:50-200
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Concentration :</b>	1 mg/ml

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

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**Molecularweight :** 301kD

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**Cell Pathway :** Cell\_Cycle\_G1S;Cell\_Cycle\_G2M\_DNA;p53;

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**Background :** The protein encoded by this gene belongs to the PI3/PI4-kinase family, and is most closely related to ATM, a protein kinase encoded by the gene mutated in ataxia telangiectasia. This protein and ATM share similarity with Schizosaccharomyces pombe rad3, a cell cycle checkpoint gene required for cell cycle arrest and DNA damage repair in response to DNA damage. This kinase has been shown to phosphorylate checkpoint kinase CHK1, checkpoint proteins RAD17, and RAD9, as well as tumor suppressor protein BRCA1. Mutations of this gene are associated with Seckel syndrome. An alternatively spliced transcript variant of this gene has been reported, however, its full length nature is not known. Transcript variants utilizing alternative polyA sites exist. [provided by RefSeq, Jul 2008],

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**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 DN

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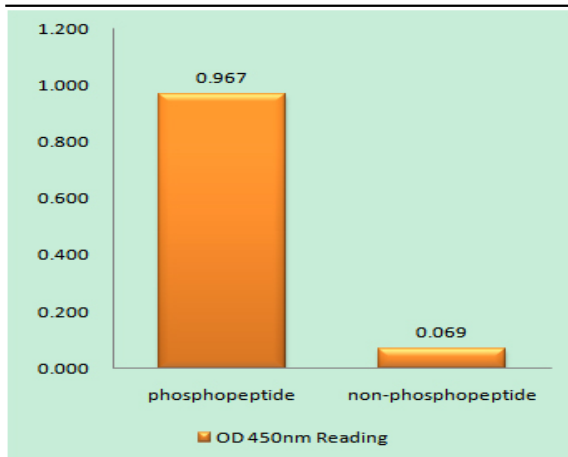
**Subcellular Location :** Nucleus . Chromosome . Depending on the cell type, it can also be found in PML nuclear bodies. Recruited to chromatin during S-phase. Redistributes to discrete nuclear foci upon DNA damage, hypoxia or replication fork stalling.

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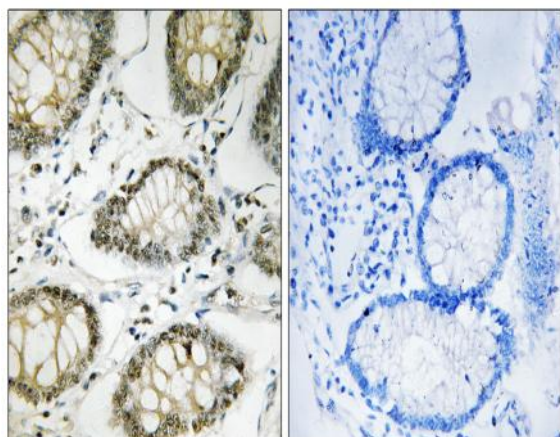
**Expression :** Ubiquitous, with highest expression in testis. Isoform 2 is found in pancreas, placenta and liver but not in heart, testis and ovary.

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## Products Images



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using ATR (Phospho-Ser428) Antibody



Immunohistochemistry analysis of paraffin-embedded human colon carcinoma, using ATR (Phospho-Ser428) Antibody. The picture on the right is blocked with the phospho peptide.