



ATR (phospho Ser428) Polyclonal Antibody

Catalog No	YP-Ab-14563
Isotype	IgG
Reactivity	Human;Rat;Mouse;
Applications	IHC;IF;ELISA
Gene Name	ATR
Protein Name	Serine/threonine-protein kinase ATR
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.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	IHC: 1/100 - 1/300. ELISA: 1/40000.. IF 1:50-200
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	ATR; FRP1; Serine/threonine-protein kinase ATR; Ataxia telangiectasia and Rad3-related protein; FRAP-related protein 1
Observed Band	
Cell Pathway	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 DN



Background

The protein encoded by this gene belongs 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],

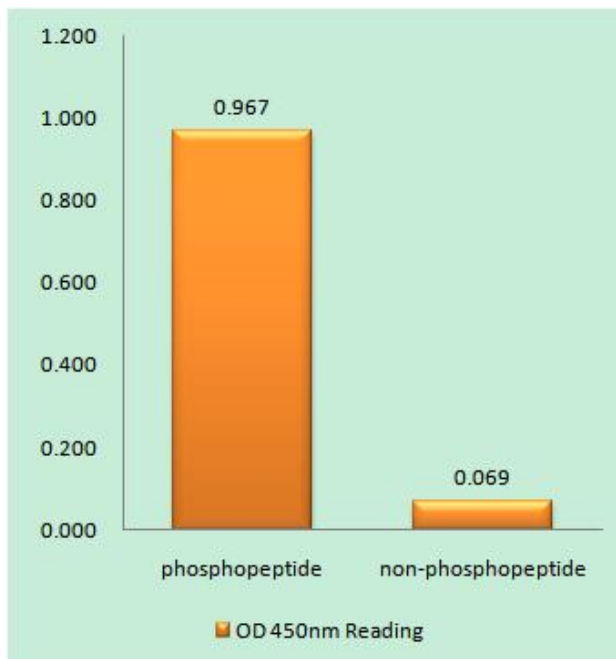
matters needing attention

Avoid repeated freezing and thawing!

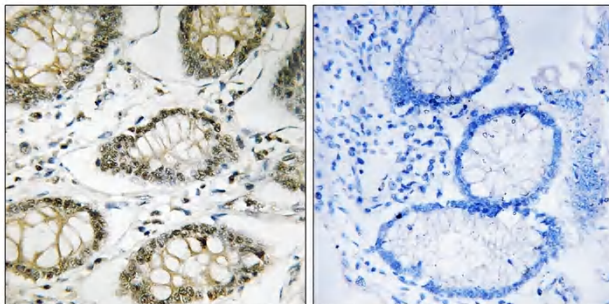
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

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.