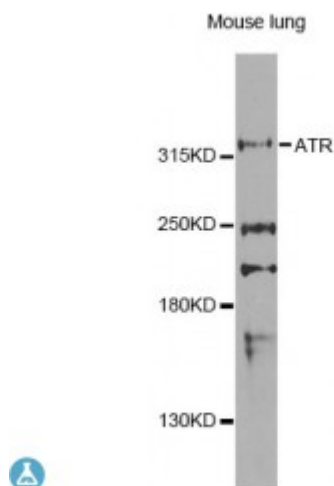


Anti-ATR Antibody



Description

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.

Model	STJ115886
Host	Rabbit
Reactivity	Mouse
Applications	WB
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 400-650 of human ATR (NP_001175.2).
Gene ID	545
Gene Symbol	ATR
Dilution range	WB 1:500 - 1:2000
Tissue Specificity	Ubiquitous, with highest expression in testis, Isoform 2 is found in pancreas, placenta and liver but not in heart, testis and ovary
Purification	Affinity purification

Note	For Research Use Only (RUO).
Protein Name	Serine/threonine-protein kinase ATR
Molecular Weight	301.367 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:882OMIM:210600Reactome:R-HSA-1221632
Alternative Names	Serine/threonine-protein kinase ATR
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 p53/TP53, 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,
Cellular Localization	Nucleus,
Post-translational Modifications	Phosphorylated