ATR Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ATR, Polyclonal Antibody
Full Product Name	ATR, CT (Serine/Threonine-protein Kinase ATR, Ataxia Telangiectasia And Rad3-related Protein, FRAP-related Protein 1, FRP1) (Biotin)
Product Gene Name	anti-ATR antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Biotin.
Purity/Purification	Purified by Protein G Affinity Chromatography.
Specificity	Recognizes human ATR.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	301,367 Da
Chromosome Location	Chromosome: 3; NC_000003.11 (142168077..142297668, complement). Location: 3q23
OMIM	210600
3D Structure	ModBase 3D Structure for Q13535
Immunogen	Synthetic peptide selected from the C-terminal region of human ATR (KLH).
Conjugate	Biotin
Note	Preservative Free
Product Categories/Family for anti-ATR antibody	Antibodies; Protein Kinases
Applications Tested/Suitable for anti-ATR antibody	Immunohistochemistry (IHC), ELISA (EIA)
Application Notes for anti-ATR antibody	IHC: 1:50-1:100 ELISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-ATR antibody	MBS6464454 is an antibody targeting ATR. Also known as ATR, CT (Serine/Threonine-protein Kinase ATR, Ataxia Telangiectasia And Rad3-related Protein, FRAP-related Protein 1, FRP1) (Biotin). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-ATR antibody	1. Blume-Jensen P, et al. Nature 2001. 411: 355. 2. Cantrell D, J. Cell Sci. 2001. 114: 1439. 3. Jhiang S Oncogene 2000. 19: 5590. 4. Manning G, et al. Science 2002. 298: 1912. 5. Moller, D, et al. Am. J. Physiol. 1994. 266: C351-C359. 6.Robertson, S. et al. Trends Genet. 2000. 16: 368. 7.Robinson D, et al. Oncogene 2000. 19: 5548. 8.Van der Ven, P, et al. Hum. Molec. Genet. 1993. 2: 1889. 9.Vanhaesebroeck, B, et al. Biochem. J. 2000. 346: 561. 10.Van Weering D, et al. Recent Results Cancer Res. 1998. 154: 271.

Other Notes	Small volumes of anti-ATR antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ATR. It may not necessarily be applicable to this product.

NCBI GI #	157266317
NCBI GeneID	545
NCBI Accession #	NP_001175.2
UniProt Primary Accession #	Q13535
UniProt Secondary Accession #	Q59HB2; Q7KYL3; Q93051; Q9BXK4
UniProt Related Accession #	Q13535
GenBank Nucleotide #	NM_001184.3
NCBI Official Full Name	serine/threonine-protein kinase ATR
NCBI Official Synonym Full Names	ataxia telangiectasia and Rad3 related
NCBI Official Symbol	ATR
NCBI Official Synonym Symbols	FRP1; MEC1; SCKL; FCTCS; SCKL1
UniProt Protein Name	Serine/threonine-protein kinase ATR
UniProt Synonym Protein Names	Ataxia telangiectasia and Rad3-related protein; FRAP-related protein 1
Protein Family	ATR-interacting protein
UniProt Gene Name	ATR
UniProt Synonym Gene Names	FRP1
UniProt Entry Name	ATR_HUMAN
NCBI Protein Information	serine/threonine-protein kinase ATR; Rad3 related protein; FRAP-related protein 1; FRAP-related protein-1; MEC1, mitosis entry checkpoint 1, homolog; ataxia telangiectasia and Rad3-related protein
NCBI Summary for ATR	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]

UniProt Comments for ATR	ATR: a ser/thr kinase of the PIKK family most closely related to ATM. 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, Chk1, MCM2, RAD17, RPA2, SMC1 and 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. Protein type: Kinase, lipid; EC 2.7.11.1; Protein kinase, Ser/Thr (non-receptor); Membrane protein, integral; Protein kinase, atypical; Kinase, protein; ATYPICAL group; PIKK family; ATR subfamily Chromosomal Location of Human Ortholog: 3q23 Cellular Component: XY body; nucleoplasm; Golgi apparatus; PML body; chromosome Molecular Function: protein dimerization activity; protein serine/threonine kinase activity; protein binding; DNA binding; MutLalpha complex binding; MutSalpha complex binding; ATP binding; protein kinase activity Biological Process: response to drug; peptidyl-serine phosphorylation; negative regulation of DNA replication; multicellular organismal development; protein amino acid autophosphorylation; regulation of protein binding; DNA damage checkpoint; positive regulation of DNA damage response, signal transduction by p53 class mediator; DNA replication; cell cycle; DNA repair; response to DNA damage stimulus; double-strand break repair via homologous recombination Disease: Seckel Syndrome 1; Cutaneous Telangiectasia And Cancer Syndrome, Familial
Research Articles on ATR	**1.** hXRCC3 S225 phosphorylation is mediated by ATR via an ATM-dependent signaling pathway.
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