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Datasheet for 600-401-A30

ATR Antibody

Overview

Description:	Anti-Serine/Threonine-Protein Kinase ATR (RABBIT) Antibody - 600-401-A30
Item No.:	600-401-A30
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	Ataxia Telangiectasia Mutated (ATM) and Rad 3-related protein (ATR) is a phosphatidyl-inositol kinase (PK)-related kinase which functions in response to DNA damage and repair as well as at DNA replication checkpoints during the cell cycle. ATR 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. ATR is a member of the DNA-PK kinase family and is closely related to ATM and DNA-PK for which DNA stimulates the observed kinase activity. Chromosomal remodeling proteins have also been reported to associate with ATR complexes, including histone deacetylases (HDAC1, HDAC2 and CHD4). ATR is known to phosphorylate BRCA1, CHEK1, MCM2, RAD17, RPA2, SMC1 and TP53/p53 which collectively inhibit DNA replication and mitosis and promote DNA repair, recombination and apoptosis. ATR is a nuclear protein, but can also be found in PML nuclear bodies in certain cell types. ATR is recruited to chromatin during S-phase and redistributes to discrete nuclear foci upon DNA damage, hypoxia or replication fork stalling.
Synonyms:	rabbit anti-ATR antibody, Serine/threonine-protein kinase ATR, Ataxia telangiectasia and Rad3-related protein, FRAP-related protein 1, ACTR antibody, AIB1 antibody, amplified in breast cancer 1 antibody, CAGH16 antibody, CBP interacting protein antibody, CTG26 antibody, FRP1, FRP-1, FRP 1
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	ATR
Reactivity:	Human
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region of human ATR protein.
Purity/Specificity:	This product was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody is specific for human ATR protein. A BLAST analysis was used to suggest cross-reactivity with ATR from human, mouse, rat, monkey, dog, fish and Xenopus sources based on a 100% homology with the immunizing sequence. Cross-reactivity with ATR from other sources has not been determined.
Relevant Links:	• NCBI - 157266317 • UniProtKB - Q13535 • GeneID - 545

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 301 kDa in size corresponding to ATR by western blotting in the appropriate cell lysate or extract. Lysates from HeLa, U2OS, RAW264.7 or HEK293 cells are suggested for western blotting. ATR is ubiquitously expressed, with highest expression levels in the testes. Note that isoform 2 is found in pancreas, placenta and liver but not in heart, testis and ovary.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:15,000 - 1:70,000
WB:	1:1,000 - 1:5,000

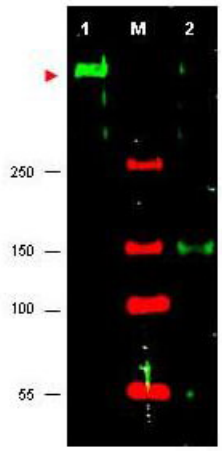
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.28 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot
Western blot using Rockland's Anti-ATR antibody. Lane 1: HeLa cell nuclear extract (p/n W09-001-367). Lane 2: HeLa cell nuclear extract pre-incubated with the immunizing peptide (50 µg peptide for 1 h at room temperature followed by centrifugation). Goat serum was used at 5% for blocking. Primary antibody: Anti-ATR at 1:1,400 dilution. The arrowhead corresponds to ~301kDa ATR when compared to MW markers (Lane M).

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