

#2790 Store at -20°C

ATR Antibody

100 μl
 (10 Western mini-blot)



Orders ■ 877-616-CELL (2355)
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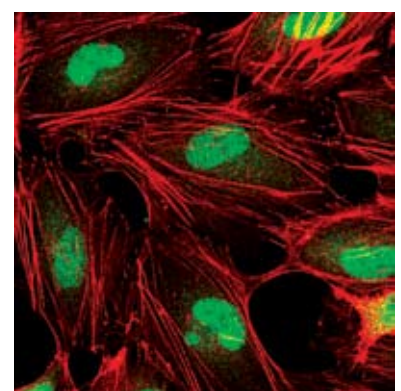
This product is for *in vitro* research use only and is not intended for use in humans or animals.
 This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IF-IC Endogenous	H, M, R, Mk, Hm, (B, Dg)	250 kDa	Rabbit**

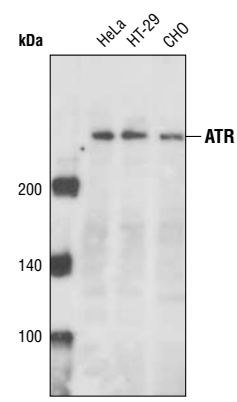
Background: Ataxia telangiectasia mutated kinase (ATM) and ataxia telangiectasia and Rad3-related kinase (ATR) are PI-3 Kinase-related kinase (PIKK) family members that phosphorylate multiple substrates on serine or threonine residues that are followed by a glutamine in response to DNA damage or replication blocks (1-3). Despite the essential role of ATR in cell cycle signaling and DNA repair processes, little is known about its activation. While there have been no published reports of phosphorylation sites on ATR, Cell Signaling Technology has produced an antibody directed against phospho-ATR (Ser428) that demonstrates *in vivo* and UV-induced phosphorylation of this protein. This reagent could prove to be a valuable tool for monitoring ATR activation. Proline-directed phosphorylation sites like this one are often targeted by CDKs and MAPKs and can often dramatically affect protein conformation (4,5).

Specificity/Sensitivity: ATR Antibody detects endogenous levels of total ATR protein.

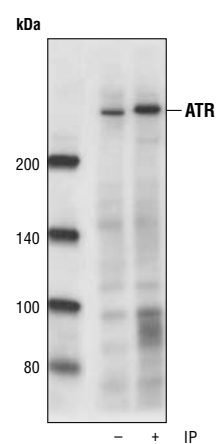
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to central residues of human ATR. Antibodies are purified by protein A and peptide affinity chromatography.



Confocal immunofluorescent analysis of HeLa cells using ATR Antibody (green). Actin filaments have been labeled with Alexa Fluor[®] 555 phalloidin (red).



Western blot analysis of extracts from various cell types using ATR Antibody.



Immunoprecipitation of ATR from HeLa cell lysates using ATR Antibody. Western blot detection was performed using the same.

Entrez-Gene ID #545
Swiss-Prot Acc. #Q13535

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 $\mu\text{g}/\text{ml}$ BSA and 50% glycerol. Store at -20°C . Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

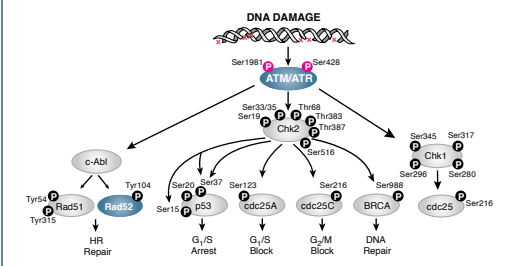
Western blotting	1:1000
Immunoprecipitation	1:250
Immunofluorescence (IF-IC)	1:100

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

- (1) Kastan, M.B. and Lim, D.S. (2000) *Nat. Rev. Mol. Cell Biol.* 1, 179–186.
- (2) Abraham, R.T. (2004) *DNA Repair (Amst)* 3, 883–887.
- (3) Shechter, D. et al. (2004) *DNA Repair (Amst)* 3, 901–908.
- (4) Pinna, L.A. and Ruzzene, M. (1996) *Biochim. Biophys. Acta* 1314, 191–225.
- (5) Zhou, X.Z. et al. (1999) *Cell Mol. Life Sci.* 56, 788–806.



IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.