

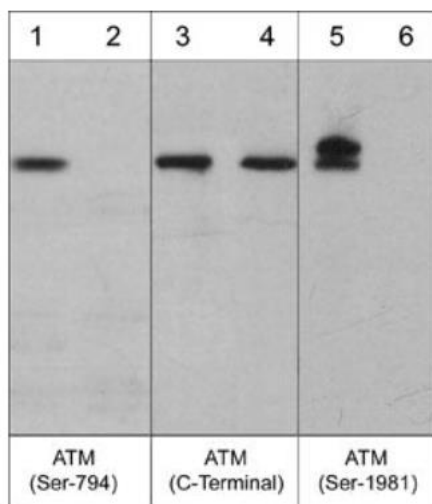
Product Datasheet

Anti-ATM (Ser-1981), Phosphospecific Antibody

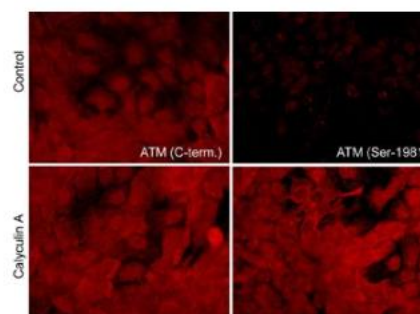
Overview

Catalog #	AM3661
Size	100 µL
Host Species	Mouse Monoclonal
Format	Protein A Purified
Applications	WB 1:1000 ICC 1:200 IP 1:100
Species Tested	Human, Mouse, and Rat
Immunogen	Clone M366 was generated from a phospho-peptide that included amino acids surrounding Serine 1981 in human ATM. This sequence has high homology to the conserved site in rat and mouse ATM.
Molecular Weight	370 kDa
Cite this Antibody	PhosphoSolutions Cat# AM3661, RRID:AB_1944427

Images



Western blot of human A431 cells treated with Calyculin A (100 nM) for 30 min. Blot lanes were untreated (lanes 1, 3, & 5) or treated with lambda phosphatase (lanes 2, 4, & 6) then probed with anti-ATM (Ser-794) (lanes 1 & 2), anti-ATM (C-Terminal) (lanes 3 & 4), or anti-ATM (Ser-1981) (lanes 5 & 6).



Immunocytochemical labeling of ATM phosphorylation in control (Top row) or calyculin A-treated A431 cells (Bottom row). The cells were labeled with mouse monoclonal ATM (C-terminal region) (AM3611) and ATM (Ser-1981) (AM3661). The antibodies were detected using goat anti-mouse-DyLight® 594.

Details

Target Description	Ataxia telangiectasia mutated kinase (ATM) is a serine/threonine kinase that regulates cell cycle checkpoints and DNA repair. Mutations of ATM cause a spectrum of defects ranging from neurodegeneration to cancer predisposition. Activation of ATM after DNA damage involves Cdk5 mediated phosphorylation of Ser-794 followed by autophosphorylation at Ser-1891. Active ATM kinase regulates a number of proteins involved in cell cycle checkpoint control, apoptosis and DNA repair. The Cdk5–ATM pathway regulates phosphorylation and function of the ATM targets p53 and H2AX in postmitotic neurons. Other known substrates of ATM include Chk2, Chk1, CtIP, 4E-BP1, BRCA1, RPA3, SMC1, FANCD2, Rad17, Artemis, Nbs1, and the I-2 regulatory subunit of PP1. Thus, activation of Cdk5 by DNA damage may be an important initiator of ATM-dependent regulation of cell cycle checkpoints.
Specificity	This antibody detects a 370 kDa* protein corresponding to the molecular mass of ATM on SDS-PAGE immunoblots of calyculin A treated human A431 and Jurkat Cells, but is not observed in control cells.
Quality Control	Western blots performed on each lot.
Buffer	PBS + 1 mg/ml BSA, 0.05% NaN ₃ and 50% glycerol
Storage	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.
Stability	After date of receipt, stable for at least 1 year at -20°C.

Significant Citations

Park, H.-H., Kim, H.-R., Park, S.-Y., Hwang, S.-M., Hong, S.M., Park, S., Kang, H.C., Morgan, M.J., Cha, J.-H., Lee, D., Roe, J.-S. and Kim, Y.-S. (2021). RIPK3 activation induces TRIM28 derepression in cancer cells and enhances the anti-tumor microenvironment. *Molecular Cancer*, 20(1).

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