# Human/Mouse/Rat Phospho-ATM (S1981) Antibody

Antigen Affinity-purified Polyclonal Rabbit IgG
Catalog Number: AF1655

## DESCRIPTION

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| **Species Reactivity** | Human/Mouse/Rat |
| **Specificity** | Detects human ATM when phosphorylated at S1981. Also detects the comparable phosphorylated sites in mouse ATM (S1987) and rat ATM (S1952). |
| **Source** | Polyclonal Rabbit IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | Phosphopeptide containing human ATM S1981 site |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

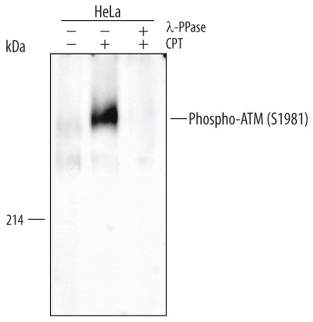
## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Western Blot** | 1 µg/mL | See Below |
| **Simple Western** | 10 µg/mL | See Below |

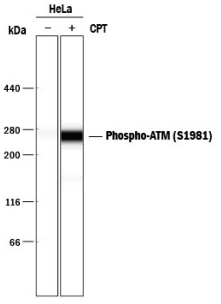
## DATA

### Western Blot




**Detection of Human/Mouse/Rat Phospho-ATM (S1981) by Western Blot.** Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line untreated (-) or treated (+) with 1 µM camptothecin (CPT) for 1 hour. PVDF membrane was probed with 1 µg/mL Rabbit Anti-Human/Mouse/Rat Phospho-ATM (S1981) Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1655) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band for Phospho-ATM (S1981) was detected at approximately 370 kDa (as indicated). The phospho-specificity of this antibody was supported by decreased labeling following treatment with 600 U λ-phosphatase (λ-PPase) for 1 hour. This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### Simple Western




**Detection of Human Phospho-ATM (S1981) by Simple Western™.** Simple Western lane view shows lysates of HeLa human cervical epithelial carcinoma cell line untreated (-) or treated (+) with 1 µM Camptothecin (CPT) for 1 hour, loaded at 0.2 mg/mL. A specific band was detected for Phospho-ATM (S1981) at approximately 270 kDa (as indicated) using 10 µg/mL of Rabbit Anti-Human/Mouse/Rat Phospho-ATM (S1981) Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1655). This experiment was conducted under reducing conditions and using the 66-440 kDa separation system.

## PREPARATION AND STORAGE

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| **Reconstitution** | Reconstitute at 0.2 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

## BACKGROUND

The Ataxia telangiectasia-mutated (ATM) protein kinase exists as a dimer in the cell nucleus. Changes in DNA structure induced by genotoxic stress lead to activation of ATM and phosphorylation of S1981 in *trans*. Once S1981 is phosphorylated, the dimer dissociates and active ATM monomers signal to downstream targets.



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