

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human ATM in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human ATR is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 664703
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human ATM Arg2138-Arg2400 Accession # Q13315
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

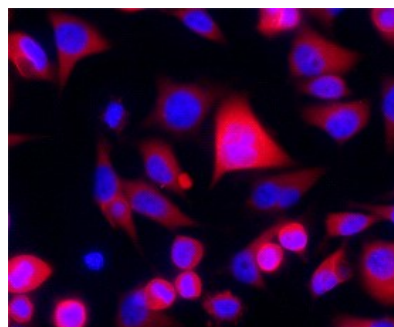
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below

## DATA

### Immunocytochemistry



**ATM in HeLa Human Cell Line.**  
ATM was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human ATM Monoclonal Antibody (Catalog # MAB22901) at 25 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

ATM (Ataxia Telangiectasia Mutated) is a 350-370 kDa member of the ATM subfamily, PI3/PI4-kinase family of enzymes. It is ubiquitously expressed, and serves as a DNA damage sensor. ATM is activated via autophosphorylation at double strand breaks. Following activation, multiple substrates are phosphorylated, including Chk2, and ATR is recruited and activated as part of an integrated repair circuit. Human ATM is 3056 amino acids (aa) in length. It contains one FAT (focal adhesion targeting) domain (aa 1960-2566), a PI-3/PI-4 kinase catalytic domain (aa 2712-2962) and a second, C-terminal FAT domain (aa 3024-3056). There are at least six Ser and four Thr utilized phosphorylation sites, and one critical acetylation activation site at Lys3016. There are at least four potential splice variants. One shows a Trp substitution for aa 536-3056, a second contains an eight aa substitution for aa 2506-3056, a third possesses a five aa substitution for aa 1637-3056, while a fourth contains a premature truncation after Lys2756. Over aa 2138-2400, human ATM shares 82% aa identity with mouse ATM.