SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-phospho-ATM (Ser1981)antibody

Catalog Number: SL2272R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	phospho-ATM (Ser1981)
Immunogen:	KLH conjugated Synthesised phosphopeptide derived from human ATM around the phosphorylation site of Ser1981: EG(p-S)QS
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 Flow-Cyt=1μg /test （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human(predicted:Mouse,Rat)
Predicted MW.:	370kDa
Subcellular Location:	The nucleus cytoplasmic
Background:	ATM is a 370 kDa nuclear phosphoprotein involved in the autosomal recessive disease Ataxia Telangiectasia (AT). ATM belongs to a novel family of proteins associated with cell cycle regulation, apoptosis, and response to DNA damage repair (DNA damage caused by such things as ionizing irradiation activates ATM kinase). The C terminal region has extensive homology to the catalytic domains of Phosphatidylinositol 3 kinases (PI3 kinases). **Subcellular Location:** Nucleus. Cytoplasmic vesicle. Primarily nuclear. Found also in endocytic vesicles in association with beta-adaptin. **Tissue Specificity:** Found in pancreas, kidney, skeletal muscle, liver, lung, placenta, brain, heart, spleen, thymus, testis, ovary, small intestine, colon and leukocytes.

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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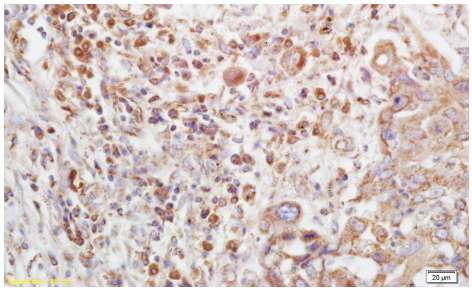
	Post-translational modifications: Phosphorylated by NUAK1/ARK5. Autophosphorylation on Ser-367, Ser-1893, Ser-1981 correlates with DNA damage-mediated activation of the kinase. Acetylation, on DNA damage, is required for activation of the kinase activity, dimer-monomer transition, and subsequent autophosphorylation on Ser-1981. Acetylated in vitro by KAT5/TIP60. DISEASE: Defects in ATM are the cause of ataxia telangiectasia (AT) [MIM:208900]; also known as Louis-Bar syndrome, which includes four complementation groups: A, C, D and E. This rare recessive disorder is characterized by progressive cerebellar ataxia, dilation of the blood vessels in the conjunctiva and eyeballs, immunodeficiency, growth retardation and sexual immaturity. AT patients have a strong predisposition to cancer; about 30% of patients develop tumors, particularly lymphomas and leukemias. Cells from affected individuals are highly sensitive to damage by ionizing radiation and resistant to inhibition of DNA synthesis following irradiation. Note=Defects in ATM contribute to T-cell acute lymphoblastic leukemia (TALL) and T-prolymphocytic leukemia (TPLL). TPLL is characterized by a high white blood cell count, with a predominance of prolymphocytes, marked splenomegaly, lymphadenopathy, skin lesions and serous effusion. The clinical course is highly aggressive, with poor response to chemotherapy and short survival time. TPLL occurs both in adults as a sporadic disease and in younger AT patients. Note=Defects in ATM contribute to B-cell non-Hodgkin lymphomas (BNHL), including mantle cell lymphoma (MCL). Note=Defects in ATM contribute to B-cell chronic lymphocytic leukemia (BCLL). BCLL is the commonest form of leukemia in the elderly. It is characterized by the accumulation of mature CD5+ B lymphocytes, lymphadenopathy, immunodeficiency and bone marrow failure. **Similarity:** Belongs to the PI3/PI4-kinase family. ATM subfamily. Contains 1 FAT domain. Contains 1 FATC domain. Contains 1 PI3K/PI4K domain. **Database links:** **Entrez Gene:** 472 Human **Entrez Gene:** 11920 Mouse **Entrez Gene:** 300711 Rat Omim: 607585 Human **SwissProt:** Q13315 Human **SwissProt:** Q62388 Mouse **SwissProt:** P17764 Rat

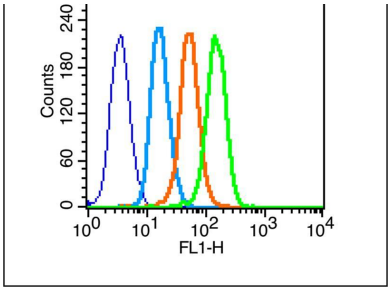
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	Unigene: 367437 Human **Unigene:** 5088 Mouse **Unigene:** 214048 Rat

[VALIDATION IMAGES]





Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min;
Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-phospho-ATM(Ser1981) Polyclonal Antibody, Unconjugated(SL2272R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

Blank control (blue line): Hela (fixed with 2% paraformaldehyde (10 min) , then permeabilized with 90% ice-cold methanol for 20 min on ice).
Primary Antibody (green line): Rabbit Anti- phospho-ATM(Ser1981) antibody (SL2272R),Dilution: 1µg /10^6 cells;
Isotype Control Antibody (orange line): Rabbit IgG .
Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC,Dilution: 1µg /test.

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