Data Sheet (Cat.No.TMAC-00328)

Anti-Phospho-ATM (Ser1981) Antibody (4B419)

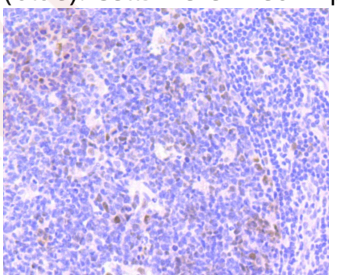
Product Details

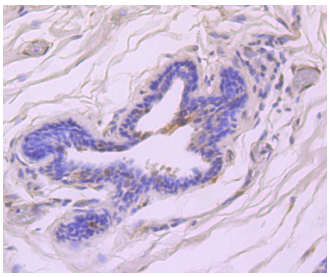
Ig Type:	IgG
Reactivity:	Human,Mouse
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 351 kDa.
Clone:	4B419
Purification:	ProA affinity purified

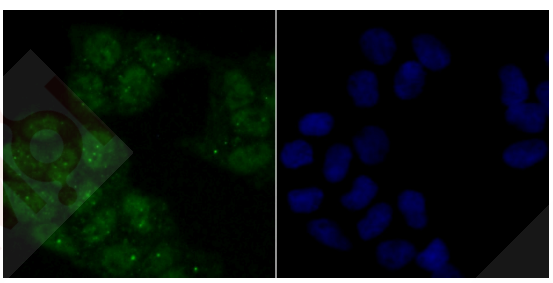
Applications

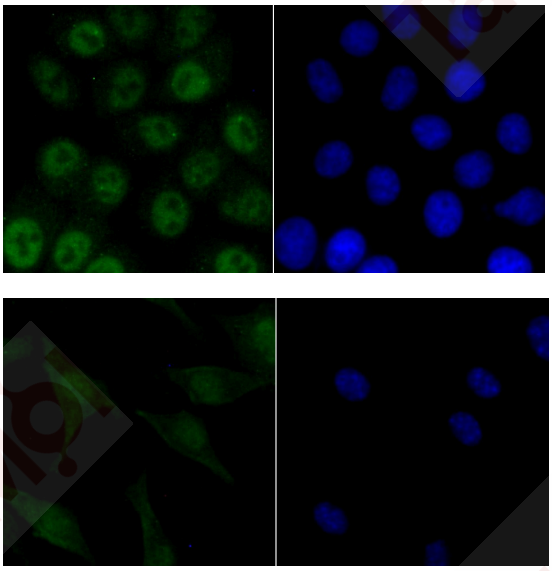
Verified Activity:

1. Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-ATM (phospho S1981) antibody. Counter stained with hematoxylin.
2. Immunohistochemical analysis of paraffin-embedded human breast cancer tissue using anti-ATM (phospho S1981) antibody. Counter stained with hematoxylin.
3. ICC staining ATM (phospho S1981) in Hela cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
4. ICC staining ATM (phospho S1981) in HepG2 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
5. ICC staining ATM (phospho S1981) in SH-SY5Y cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.









Application:	ICC/IF,IHC,IP,WB
Recommended	WB: 1:500-1000; IHC: 1:50-100; ICC/IF: 1:50-200

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Synthetic phospho-peptide corresponding to residues surrounding Ser1981 of human ATM
Antigen Species:	Human
Uniprot ID:	Q13315
Synonyms:	ATM (p-S1981);p-ATM (S1981);p-ATM (Ser1981);ATM (p-Ser1981)

Research Background

Serine / threonine protein kinase which activates checkpoint signaling upon double strand breaks (DSBs), apoptosis and genotoxic stresses such as ionizing ultraviolet A light (UVA), thus acting as a DNA damage sensor. Recognizes the substrate consensus sequence [ST] -Q. Phosphorylates 'Ser-139' of histone variant H2AX / H2AFX at double strand breaks (DSBs), recover equilibrium DNA damage response mechanism. Also plays a role in pre-B cell allelic exclusion, a process leading to expression of a single immunoglobulin heavy chain Allele to enforce clonality and monospecific recognition by the B-cell antigen receptor (BCR) expressed on individual B lymphocytes. After the introduction of DNA breaks by the RAG complex on one immunoglobulin allele, acts by mediating a repositioning of the second allele to pericentromeric heterochromatin , Soaccessability to the RAG complex and recombination of the second allele. Also involved in signal transduction and cell cycle control. May function as A genre of activation of ABL1 and SAPK. May play a role in vesicle and / or protein transport. Could play A role in T-cell development, gonad and neurological function. Plays a role in replication-dependent histone mRNA degradation. Binds DNA ends.

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