Data Sheet (Cat.No.TMAH-00088)

Anti-ATM Antibody (7Y845)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	7Y845
Purification:	Affinity-chromatography

Applications

Verified Activity:	1. Western Blot -Positive WB detected in: Hela whole cell lysate, A549 whole cell lysate, PC3 whole cell lysate, HepG2 whole cell lysate -All lanes: ATM antibody at 2.05μg/ml -Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution -Predicted band size: 350 KDa -Observed band size: 350 KDa 2. IHC image of TMAH-00088 diluted at 1:205 and staining in paraffin-embedded human testis tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system. 3. IHC image of TMAH-00088 diluted at 1:205 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system. 4. Immunoprecipitating ATM in PC3 whole cell lysate -Lane 1: Rabbit control IgG instead of TMAH-00088 in PC3 whole cell lysate. For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000) -Lane 2: TMAH-00088 (3μg) + PC3 whole cell lysate (500μg) -Lane 3: PC3 whole cell lysate (20μg)
Application:	ELISA,IHC,IP,WB
Recommended	WB:1:500-1:5000; IHC:1:50-1:200; IP:1:200-1:1000.

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:	A synthetic peptide: Human ATM
Antigen Species:	Human
Gene ID:	472
Uniprot ID:	Q13315
Synonyms:	MGC74674;Ataxia telangiectasia mutated homolog;telomere maintenance 1;TELO1;ATM serine/threonine kinase;homolog;ATD;AT1;ATA;A-T mutated homolog;Telomere fusion protein;DKFZp781A0353;ATE;ATC;Serine/threonine-protein kinase ATM;Ataxia telangiectasia mutated;AT mutated;TEL1;A-T mutated;ATDC;OTTHUMP00000232981;Serine protein kinase ATM;Tefu
Biology Area:	Epigenetics and Nuclear Signaling

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), thereby acting as a DNA damage sensor. Recognizes the substrate consensus sequence [ST]-Q. Phosphorylates 'Ser-139' of histone variant H2AX at double strand breaks (DSBs), thereby regulating 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, preventing accessibility to the RAG complex and recombination of the second allele. Also involved in signal transduction and cell cycle control. May function as a tumor suppressor. Necessary for activation of ABL1 and SAPK. Phosphorylates DYRK2, CHEK2, p53/TP53, FBXW7, FANCD2, NFKBIA, BRCA1, CTIP, nibrin (NBN), TERF1, UFL1, RAD9, UBQLN4 and DCLRE1C. 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. Phosphorylation of DYRK2 in nucleus in response to genotoxic stress prevents its MDM2-mediated ubiquitination and subsequent proteasome degradation. Phosphorylates ATF2 which stimulates its function in DNA damage response. Phosphorylates ERCC6 which is essential for its chromatin remodeling activity at DNA double-strand breaks.

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