

Product datasheet for **TA319301**

ATM Sheep Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	ELISA: 1:2,000 - 1:10,000, WB: 1:500 - 1:2,000
Reactivity:	Human
Modifications:	Phospho-specific
Host:	Sheep
Clonality:	Polyclonal
Immunogen:	This antibody was affinity purified from whole rabbit serum prepared by repeated immunizations with a synthetic peptide corresponding to a region near serine 1981 of human ATM conjugated to KLH using maleimide.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	ATM serine/threonine kinase
Database Link:	NP_000042 Entrez Gene 472 Human Q13315
Synonyms:	AT1; ATA; ATC; ATD; ATDC; ATE; TEL1; TELO1



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Note: ATM, the gene mutated in the hereditary disease ataxia-telangiectasia, codes for a protein kinase that acts as a master regulator of cellular responses to DNA double-strand breaks. ATM is normally inactive and the question of how it is activated in the event of DNA damage (due to ionizing radiation for instance) is central to understanding its function. ATM protein is now shown to be present in undamaged cells as an inactive dimer. Low doses of ionizing radiation, which induce only a few DNA breaks, activate at least half of the total ATM protein present, possibly in response to changes in chromatin structure. The ATM gene encodes a 370-kDa protein that belongs to the phosphoinositide 3-kinase (PI(3)K) superfamily, but which phosphorylates proteins rather than lipids. The 350-amino-acid kinase domain at the carboxy terminus of this large protein is the only segment of ATM with an assigned function. Exposure of cells to IR triggers ATM kinase activity and this function is required for arrests in G1, S and G2 phases of the cell cycle. Several substrates of the ATM kinase participate in these IR-induced cell-cycle arrests. These include p53, Mdm2 and Chk2 in the G1 checkpoint; Nbs1, Brca1, FancD2 and SMC1 in the transient IR-induced S-phase arrest; and Brca1 and hRad17 in the G2/M checkpoint. This antibody is similar to the rabbit host antibody discussed by Bakkenist, C. J. & Kastan, M. B. in Nature 421, 499-506 (2003).

Protein Families: Druggable Genome, Protein Kinase, Transcription Factors

Protein Pathways: Apoptosis, Cell cycle, p53 signaling pathway

Product images:



WB of Sheep Anti-ATM pS1981 polyclonal antibody. Lane 1: untreated MCF-7 cell lysate. Lane 2: Hydrogen Peroxide stimulated MCF-7 Whole Cell Lysate. Load: 35 ug per lane. Primary antibody: ATM pS1981 antibody at 1:1000 for 1 h at room temperature. Secondary antibody: IRDye™800 conjugated Donkey anti-Sheep IgG secondary antibody at 1:5,000 for 1h at room temperature. Block: 5% BLOTTO overnight at 4°C.