

ATM Phospho-Regulation Antibody Sampler Kit

Catalog # AK6300

Kit Summary:

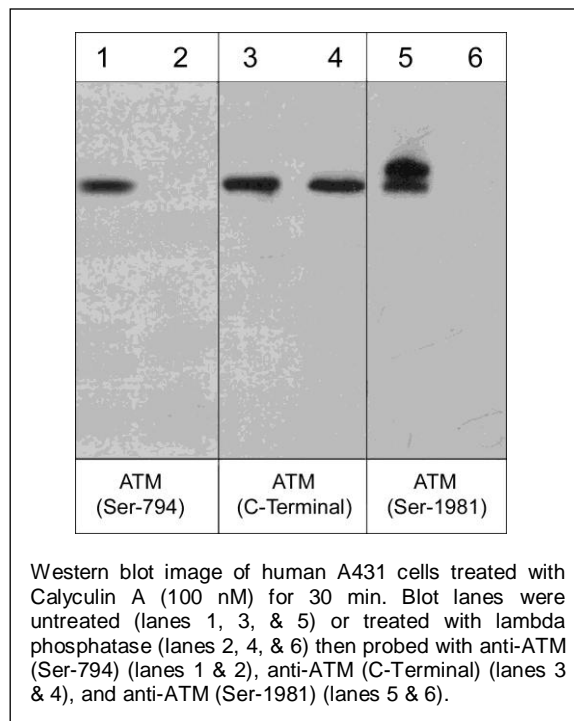
The ATM phospho-regulation antibody sampler kit can be used to detect ATM phosphorylation on Ser-794 and Ser-1981. The kit also includes a monoclonal antibody to monitor total ATM expression levels and secondary reagents for detection of these antibodies.

Background:

Ataxia telangiectasia mutated kinase (ATM) is a serine/threonine kinase that regulates cell cycle checkpoints and DNA repair. Mutations of ATM cause a spectrum of defects ranging from neurodegeneration to cancer predisposition. Activation of ATM after DNA damage involves Cdk5 mediated phosphorylation of Ser-794 followed by autophosphorylation at Ser-1981. Active ATM kinase regulates a number of proteins involved in cell cycle checkpoint control, apoptosis and DNA repair. The Cdk5-ATM pathway regulates phosphorylation and function of the ATM targets p53 and H2AX in postmitotic neurons. Other known substrates of ATM include Chk2, Chk1, CtIP, 4E-BP1, BRCA1, RPA3, SMC1, FANCD2, Rad17, Artemis, Nbs1 and the I-2 regulatory subunit of PP1. Thus, activation of Cdk5 by DNA damage may be an important initiator of ATM-dependent regulation of cell cycle checkpoints.

References:

Shiloh, Y. (1997) Annu Rev Genet. 31:635.
Lee, J.H. & Paull, T.T. (2007) Oncogene 26:7741.
Tian, B. et al. (2009) Nat Cell Biol. 11:211.



Kit Components:

Catalog#	Description	Host	Size	Applications	Species Reactivity	MW (kDa)
AP3631	ATM (Ser-794), phospho-specific	Rabbit pAb	50 µl	WB, E, ICC	H, R, M	370
AM3661	ATM (Ser-1981), phospho-specific	Mouse mAb	50 µl	WB, E, IP, ICC	H, R, M	370
AM3611	ATM (C-terminal region)	Mouse mAb	50 µl	WB, E, IP, ICC	H	370
MS3001	Anti-Mouse Ig:HRP	Donkey pAb	100 µl	WB, E		
RS3251	Anti-Rabbit Ig Light-Chain Specific:HRP	Mouse mAb	100 µl	WB, E		

Applications: WB = western blot, E = ELISA, IP = immunoprecipitation, ICC = immunocytochemistry. Species: H = Human, R = Rat, M = Mouse

Buffers and Storage:

Rabbit polyclonal and mouse monoclonal affinity-purified antibodies are supplied in phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Secondary reagents are supplied in phosphate-buffered saline, 50% glycerol, and 1 mg/ml BSA. Store at -20°C. Stable for 1 year.

FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

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