

ATM (D2E2) Rabbit mAb

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID # 472
Swiss-Prot Acc. # Q13315

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M	350 kDa	Rabbit IgG**

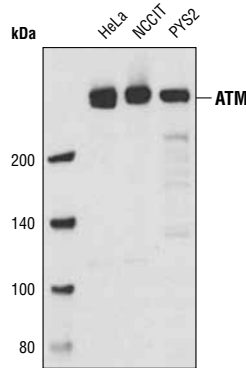
Background: Ataxia telangiectasia mutated kinase (ATM) is a serine/threonine kinase that regulates cell cycle checkpoints and DNA repair (1). Activation of ATM by autophosphorylation on Ser1981 occurs in response to exposed DNA double stranded breaks. ATM kinase regulates a number of proteins involved in cell cycle checkpoint control, apoptosis and DNA repair. Known substrates include p53, Chk2, Chk1, CtIP, 4E-BP1, BRCA1, RPA3, H2AX, SMC1, FANCD2, Rad17, Artemis, Nbs1 and the I-2 regulatory subunit of PP1 (1,2). Mutations in the corresponding ATM gene results in ataxia telangiectasia (AT), an autosomal recessive disease characterized by uncoordinated muscle movement and neurodegeneration. Cells from AT patients display defective DNA damage-induced checkpoint activation, sensitivity to radiation and a higher frequency of chromosome breakage (3,4).

Specificity/Sensitivity: ATM (D2E2) Rabbit mAb detects endogenous levels of total ATM protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with recombinant human ATM.

Background References:

- (1) Lee, J.H. and Paull, T.T. (2007) *Oncogene* 26, 7741–8.
- (2) Tang, X. et al. (2008) *Mol Cell Biol* Epub ahead of print.
- (3) Shiloh, Y. (1997) *Annu Rev Genet* 31, 635–62.
- (4) Petrini, J.H. (2000) *Curr Opin Cell Biol* 12, 293–6.



Western blot analysis of extracts of HeLa, NCCIT and PYS2 cells using ATM (D2E2) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.