

Trusted expertise through every phase

Introducing recombinant ATM

Merck Millipore is pleased to announce the addition of ATM to its product and service portfolio!

ATM: a master regulator

ATM (ataxia telangiectasia mutated) is a serine/threonine kinase of the phosphatidylinositol 3-kinase related kinase (PIKK) family and is a master regulator of cell death after DNA damage. ATM-inhibited cells have increased sensitivity to radiation, so drugs blocking ATM may improve the effectiveness of radiation therapy for cancer. ATM also plays a critical role in neuron death, so ATM inhibitors are being studied for the treatment of neurodegenerative diseases, such as Alzheimer's and Parkinson's diseases.

Merck Millipore's recombinant ATM: validated purity and activity

Our scientists have generated recombinantly expressed ATM and developed an assay for detecting inhibitors of its kinase activity. ATM activity is detected by monitoring the phosphorylation of p53, one of ATM's intracellular substrates.

Get Started

Assay components for conducting the ATM assay are available in standard and bulk quantities.

Description	Catalogue No.
ATM, active	14-933
p53	23-034
Anti-Myc Tag Antibody	05-724
ATM Single-point screen	Service
ATM Dose Response	Service

Step ahead of the field.
New recombinant ATM—a breakthrough for drug discovery research from the original Upstate® kinase experts.

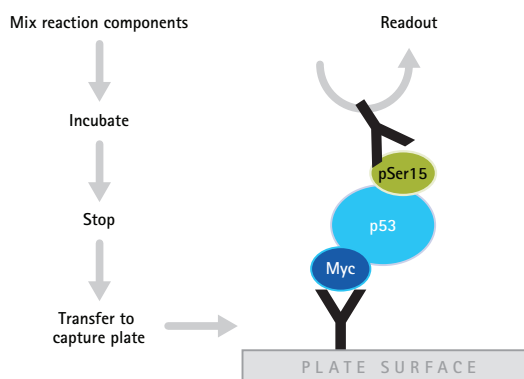


Figure 1: Schematic for ELISA detection of ATM activity. Following the incubation with c-Myc-tagged p53 and ATP, the products are captured onto a microplate coated with anti-c-Myc antibody. The reaction components are washed away, leaving just the p53 on the plate. Phosphorylated p53 is detected using a phosphospecific antibody to Ser15 of p53.

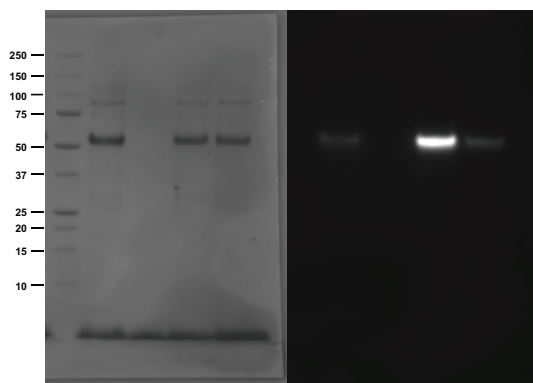


Figure 2: Western blot demonstrates p53 phosphorylation at Ser15. Left hand panel is the Ponceau stain of the nitrocellulose membrane before blotting. Right hand panel is the Western blot. Lanes (L-R) are: markers; ATM + p53 (no ATP); ATM + ATP (no p53); ATM + ATP + p53; p53 only.

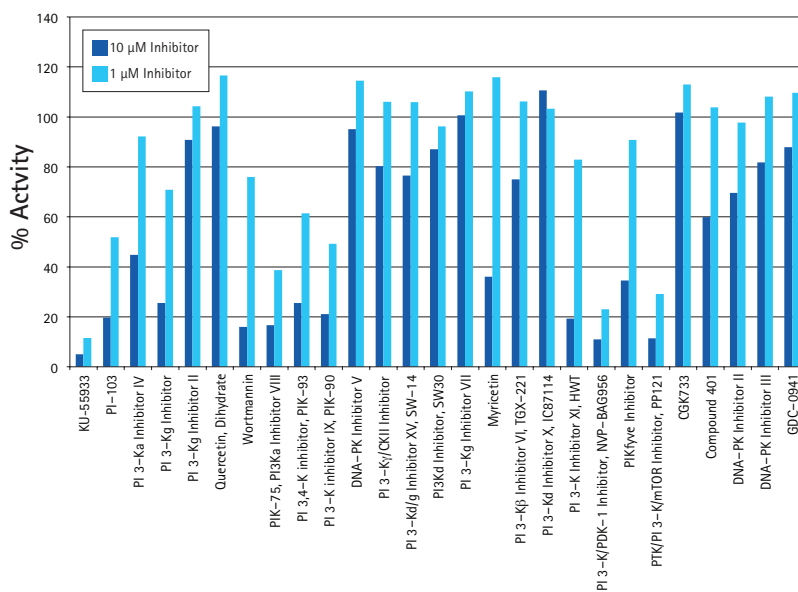


Figure 3: The ATM assay can be used to screen inhibitors. ATM was assayed by ELISA in the presence of selected small molecule inhibitors at 1 and 10 μM .

The ATM activity assay is available as a service for compound screening and other investigative work through our KinaseProfiler™ services. Please contact us for further information: kinases@merckgroup.com

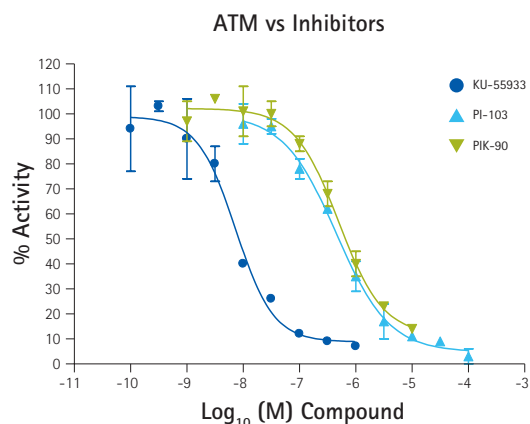


Figure 4: Dose responses for selected inhibitors. EC_{50} s are: KU-55933, 7 nM; PI-103, 450 nM, PIK-90, 500 nM.

ATM inhibitors

Description	Catalogue No.
ATM Kinase Inhibitor I	118500-10MG
InSolution™ ATM Kinase Inhibitor	118502-2MG

Now shipping—contact us today to place your order!



www.merckmillipore.com

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