

# Atm (N-17): sc-1213

## BACKGROUND

The phosphatidylinositol kinase (PIK) family members fall into two distinct subgroups. The first subgroup contains proteins such as the PI 3- and PI 4-kinases and the second group comprises the PIK-related kinases. The PIK-related kinases include Atm, DNA-PKCS and FRAP. These proteins have in common a region of homology at their carboxy-termini that is not present in the PI 3- and PI 4-kinases. The Atm gene is mutated in the autosomal recessive disorder ataxia telangiectasia (AT) that is characterized by cerebellar degeneration (ataxia) and the appearance of dilated blood vessels (telangiectases) in the conjunctivae of the eyes. AT cells are hypersensitive to ionizing radiation, impaired in mediating the inhibition of DNA synthesis and display delays in p53 induction.

## REFERENCES

1. Hartley, K.O., et al. 1995. DNA-dependent protein kinase catalytic subunit: a relative of phosphatidylinositol 3-kinase and the ataxia telangiectasia gene product. *Cell* 82: 849-856.
2. Nowak, R. 1995. Discovery of AT gene sparks biomedical research bonanza. *Science* 268: 1700-1701.
3. Savitsky, K., et al. 1995. A single ataxia telangiectasia gene with a product similar to PI-3 kinase. *Science* 268: 1749-1753.

## CHROMOSOMAL LOCATION

Genetic locus: ATM (human) mapping to 11q22.3.

## SOURCE

Atm (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping central region of Atm of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1213 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Atm (N-17) is recommended for detection of Atm of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Atm (N-17) is also recommended for detection of Atm in additional species, including equine and canine.

Suitable for use as control antibody for Atm siRNA (h): sc-29761, Atm shRNA Plasmid (h): sc-29761-SH and Atm shRNA (h) Lentiviral Particles: sc-29761-V.

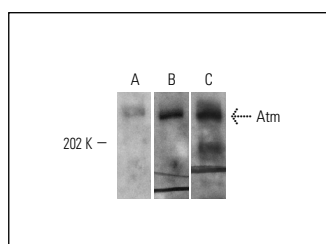
Molecular Weight of Atm: 370 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SK-N-SH cell lysate: sc-2410 or G-361 whole cell lysate.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



Western blot analysis of Atm expression in G-361 whole cell lysate. Antibodies tested include Atm (N-17): sc-1213 (A), Atm (Q-19): sc-7129 (B) and Atm (H-248): sc-7230 (C).

## SELECT PRODUCT CITATIONS

1. Oka, A., et al. 1998. Expression of the ataxia-telangiectasia gene (ATM) product in human cerebellar neurons during development. *Neurosci. Lett.* 252: 195-198.
2. Cestra, G., et al. 2005. The Abl/Arg substrate ArgBP2/nArgBP2 coordinates the function of multiple regulatory mechanisms converging on the actin cytoskeleton. *Proc. Natl. Acad. Sci. USA* 102: 1731-1736.
3. Aglipay, J.A., et al. 2006. ATM activation by ionizing radiation requires BRCA1-associated BAAT1. *J. Biol. Chem.* 281: 9710-9718.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Atm (G-12): sc-377293** or **Atm (1B10): sc-135663**, our highly recommended monoclonal alternatives to Atm (N-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Atm (G-12): sc-377293**.