ATM Antibody (R30879)

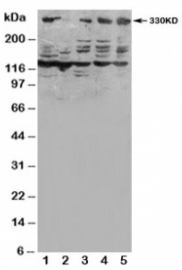
Catalog No.	Formulation	Size
R30879	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide/thimerosal
UniProt	Q13315
Applications	Western blot: 0.5-1ug/ml
Limitations	This ATM antibody is available for research use only.



Western blot testing of ATM antibody and Lane 1: rat testis; 2: U87; 3: MCF-7



Western blot testing of ATM antibody and Lane 1: HeLa; 2: SMMC-7721; 3: U87; 4: A549; 5: MCF-7

Description

Ataxia telangiectasia mutated,also known as TEL1 or TELO1, is a serine/threonine protein kinase that is recruited and activated by DNA double-strand breaks. The protein is a member of the phosphatidylinositol 3-kinase family of proteins that respond to DNA damage by phosphorylating key substrates involved in DNA repair and/or cell cycle control. Linkage analysis of ataxia-telangiectasia led to mapping of the gene to chromosome 11q22.3. Using an antiserum developed to a peptide corresponding to the deduced amino acid sequence of ATM, the protein is a single, high molecular weight protein predominantly confined to the nucleus of human fibroblasts, although it is present in both nuclear and microsomal fractions from human lymphoblast cells and peripheral blood lymphocytes. Overexpression of ATM cDNA in AT cells enhanced their survival after radiation exposure, decreased radiation-induced chromosome aberrations, reduced radioresistant DNA synthesis, and partially corrected defective cell cycle checkpoints and induction of stress-activated protein kinase. ATM has an essential role in the reconstitutive capacity of hematopoietic stem cells but is not as important for the proliferation or differentiation of progenitors, in a telomere-independent manner. It functions directly in the repair of chromosomal DNA double-stranded breaks by maintaining DNA ends in repair complexes generated during lymphocyte gene assembly.

Application Notes

The stated application concentrations are suggested starting points. Titration of the ATM antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the N-terminus of human ATM (DPETIKHLDRHSDSK) was used as the immunogen for this ATM antibody.

Storage

After reconstitution, the ATM antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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