

phospho-ATM (Ser-794) Peptide

Cat. # AX3635

Size 50 µg

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-1891. 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.

Peptide Sequence:

Phospho-ATM (Ser-794) synthetic peptide corresponding to amino acids surrounding Ser-794 in human ATM. This sequence is well conserved in rat and mouse ATM.

Buffer and Storage:

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Applications:

Blocking 1:1000

ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

Specificity:

The peptide is specifically recognized by ATM (Ser-794) phospho-specific antibody (AP3631) in ELISA, and has been shown to block the reactivity of AP3631 in Western blot. In addition, the peptide is recommended for use in blocking AP3631 reactivity in immunocytochemistry.

Related Products:

- AP3631 ATM (Ser-794), phospho-specific Rabbit Polyclonal
AM3611 ATM (C-terminal region) Mouse Monoclonal
AM3661 ATM (Ser-1981), phospho-specific Mouse Monoclonal
CM2361 Cdk5 Mouse Monoclonal
CM2311 Cdk1 (Tyr-15), phospho-specific [Conserved site] Mouse Monoclonal
MK6050 MAP Kinase Activation Antibody Sampler Kit

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