Revision 1

Store at -20C

#3429

Phospho-NuMA (Ser395) Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	238	Rabbit	#Q14980	4926

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

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

Specificity/Sensitivity

Phospho-NuMA (Ser395) Antibody detects endogenous levels of NuMA protein only when phosphorylated at Ser395.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser395 of human NuMA. Antibodies are purified using protein A and peptide affinity chromatography.

Background

The nuclear mitotic apparatus protein (NuMA) is a coiled coil protein involved in the formation and maintenance of the mitotic spindle. NuMA plays a role in chromatin organization during interphase, which influences mammary epithelial differentiation (1,2). During apoptosis, carboxy-terminal cleavage of NuMA may amplify signaling in the cell death pathway (2). NuMA is phosphorylated at numerous sites, with phosphorylation at Ser395 occurring in an ATM/ATR-dependent manner in response to DNA damage (3,4).
Phosphorylation at Thr2055 by CDK1 is required for spindle pole association of NuMA at the onset of mitosis. Dephosphorylation by PPP2CA leads to enhancement of NuMA at the cell cortex in anaphase and proper cell-cycle progression (5,6).
Phospho-NuMA (Ser395) Antibody is directed at a site that was identified at Cell Signaling Technology (CST) using PhosphoScan®, CST's LC-MS/MS platform for modification site discovery. Phosphorylation at Ser395 was discovered using an ATM/ATR substrate antibody and was shown to be induced by UV treatment. Please visit PhosphoSitePlus®, CST's modification site knowledgebase, at www.phosphosite.org for more information.

Background References

1. Abad, P.C. et al. (2007) *Mol Biol Cell* 18, 348-61.
2. Lin, H.H. et al. (2007) *J Biomed Sci* 14, 681-94.
3. Stokes, M.P. et al. (2007) *Proc Natl Acad Sci USA* 104, 19855-60.
4. Matsuoka, S. et al. (2007) *Science* 316, 1160-6.
5. Kotak, S. et al. (2013) *EMBO J* 32, 2517-29.
6. Seldin, L. et al. (2013) *Mol Biol Cell* 24, 3651-62.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

Trademarks and Patents

Limited Uses

separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

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