

NuMA Antibody



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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-IC Endogenous	H, Mk	238 kDa	Rabbit**

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).

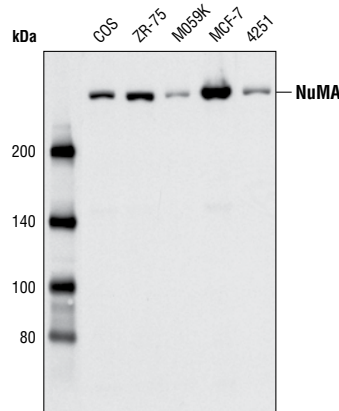
Phosphorylation at Thr2055 by CDK1 is required for spindle pole association of NuMA at the onset of mitosis. Dephosphorylation by PPP2CA leads to enhancement of NuMA at the cell cortex in anaphase and proper cell-cycle progression (5,6).

Specificity/Sensitivity: NuMA Antibody detects endogenous levels of total NuMA protein.

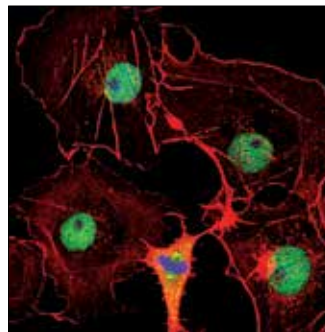
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human NuMA.

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.



Western blot analysis of extracts from various cell types using NuMA Antibody.



Confocal immunofluorescent analysis of HeLa cells using NuMA Antibody (green). Actin filaments have been labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudo-color = DRAQ5® #4084 (fluorescent DNA dye).

Entrez-Gene ID #4926
UniProt ID #Q14980

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunofluorescence (IF-IC)	1:100

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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

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Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.