

#4140 Store at -20°C

Phospho-Numb (Ser276) Antibody



100 µl
 (10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

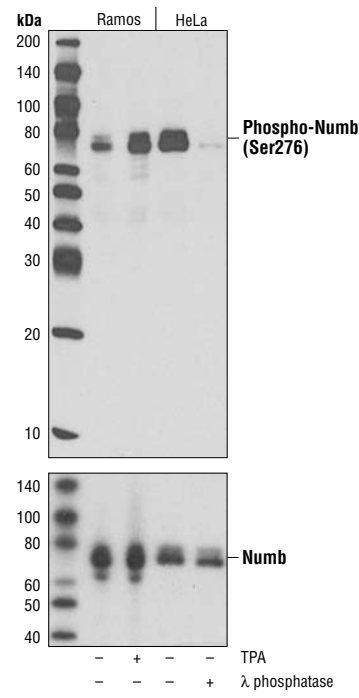
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R, Mk	72, 74 kDa	Rabbit**

Background: Numb contains an amino-terminal phosphotyrosine-binding (PTB) domain and carboxy-terminal endocytic binding motifs for α -adaptin and EH (Eps15 homology) domain-containing proteins, indicating a role in endocytosis (1,2). There are four mammalian Numb splicing isoforms that are differentially expressed and may have distinct functions (3-5). Numb acts as a negative regulator of Notch signaling by promoting ubiquitination and degradation of Notch (6). The protein is asymmetrically segregated into one daughter cell during cell division, producing two daughter cells with different responses to Notch signaling and different cell fates (7,8). The localization of Numb can also be regulated by G-protein coupled receptor (GPCR) and PKC signaling (9).

Numb can be phosphorylated at several sites including Ser7, Ser276 and Ser295. Phosphorylation at these sites regulates asymmetric membrane localization of Numb and integrin endocytosis (10-12).

Specificity/Sensitivity: Phospho-Numb (Ser276) Antibody detects endogenous levels of Numb protein only when phosphorylated on Ser276.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to Ser276 of the human Numb protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from Ramos and HeLa cells, untreated or treated with TPA (Phorbol-12-Myristate-13-Acetate, 200 nM for 30 min) or λ -phosphatase, using Phospho-Numb (Ser276) Antibody (upper) or Numb (C29G11) Rabbit mAb #2756 (lower).

Entrez-Gene ID #8650
Swiss-Prot Acc. #P49757

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

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.

Background References:

- (1) Berndt, D. et al. (2002) *Dev. Cell* 3, 221-231.
- (2) Santolini, E. et al. (2000) *J. Cell Biol.* 151, 1345-1352.
- (3) Dho, S.E. et al. (1999) *J. Biol. Chem.* 274, 33097-33104.
- (4) Verdi, J.M. et al. (1999) *Proc. Natl. Acad. Sci. USA* 96, 10472-10476.
- (5) Toriya, M. et al. (2006) *Dev. Neurosci.* 28, 142-155.
- (6) McGill, M.A. and McGlade, C.J. (2003) *J. Biol. Chem.* 278, 23196-23203.
- (7) Verdi, J.M. et al. (1996) *Curr. Biol.* 6, 1134-1145.
- (8) Reugels, A.M. et al. (2006) *Dev. Dyn.* 235, 934-948.
- (9) Dho, S.E. et al. (2006) *Mol. Biol. Cell* 17, 4142-4155.
- (10) Nishimura, T. and Kaibuchi, K. (2007) *Dev Cell* 13, 15-28.
- (11) Smith, C.A. et al. (2007) *EMBO J.* 26, 468-480.
- (12) Wirtz-Peitz, F. et al. (2008) *Cell* 135, 161-173.

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.

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.