Revision 1

Store at -20C

#9878

Phospho-Numb (Ser276) (D5C2) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IF-IC	H	Endogenous	78	Rabbit IgG	#P49757	8650

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunofluorescence (Immunocytochemistry)	1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-Numb (Ser276) (D5C2) Rabbit mAb recognizes endogenous levels of numb protein only when phosphorylated at Ser276.

Species predicted to react based on 100% sequence homology

Mouse, Rat, Chicken, Xenopus, Zebrafish, Bovine, Horse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser276 of human numb protein.

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 protein kinase C (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).

Background References

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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.
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8. Reugels, A.M. et al. (2006) *Dev. Dyn.* 235, 934-948.
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10. Nishimura, T. and Kaibuchi, K. (2007) *Dev Cell* 13, 15-28.
11. Smith, C.A. et al. (2007) *EMBO J* 26, 468-80.
12. Wirtz-Peitz, F. et al. (2008) *Cell* 135, 161-73.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human

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