

**#3659** Store at -20°C

# WAVE-2 (D2C8) XP™ Rabbit mAb



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.

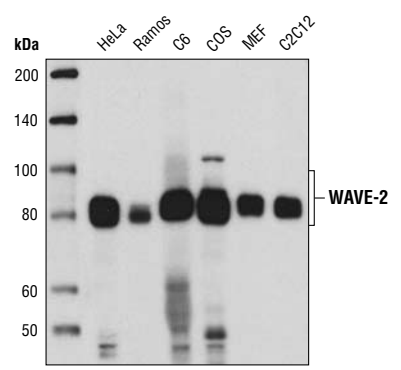
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC Endogenous	H, M, R, Mk	84 kDa	Rabbit IgG**

**Background:** Wiscott-Aldrich syndrome proteins (WASPs) mediate actin dynamics by activating the Arp2/3 actin nucleation complex in response to activated Rho family GTPases. In mammals, five WASP family members have been described. Hematopoietic WASP and ubiquitously expressed N-WASP are autoinhibited in unstimulated cells. Upon stimulation they are activated by cdc42, which relieves the autoinhibition in conjunction with phosphatidylinositol 4,5-bisphosphate. Three WAVE (Wasf, SCAR) family proteins are similar in sequence to WASP and N-WASP but lack the WASP/N-WASP autoinhibition domains and are indirectly activated by Rac (reviewed in 1). Both WASP and WAVE functions appear to be essential, as knockout of either N-WASP or Scar-2 in mice results in cardiac and neuronal defects and embryonic lethality (2,3). Loss of WASP results in immune system defects and fewer immune cells (4).

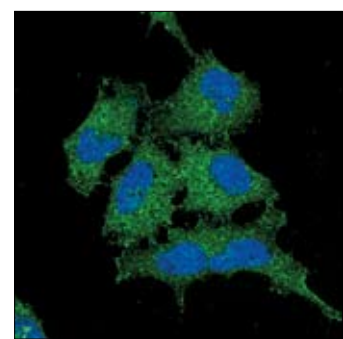
WAVE-2 (WASF2) is widely distributed, while WAVE-1 and WAVE-3 are strongly expressed in brain (5). WAVE-3 may act as a tumor suppressor in neuroblastoma, a childhood disease of the sympathetic nervous system (6). Increased expression of WAVE-3 is seen in breast cancer, and studies in breast adenocarcinoma cells indicate that WAVE-3 regulates breast cancer progression, invasion and metastasis through the p38 mitogen-activated protein kinase (MAPK) pathway (7,8).

**Specificity/Sensitivity:** WAVE-2 (D2C8) XP™ Rabbit mAb detects endogenous levels of total WAVE-2 protein.

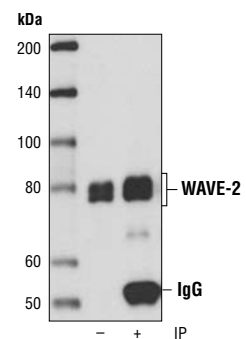
**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to central residues of human WAVE-2.



Western blot analysis of extracts from various cell types using WAVE-2 (D2C8) XP™ Rabbit mAb.



◀ Confocal immunofluorescent analysis of HeLa cells, serum-starved (upper) or EGF-treated #9908 (lower), using Wave-2 (D2C8) XP™ Rabbit mAb (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).



Immunoprecipitation of Wave-2 from HeLa cells using WAVE-2 (D2C8) XP™ Rabbit mAb. Western blot was performed using the same antibody. Lane 1 is 5% input.

**Entrez-Gene ID** #10163  
**Swiss-Prot Acc.** #Q9Y6W5

**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
Immunoprecipitation	1:50
Immunofluorescence (IF-IC)	1:50

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**Background References:**

- (1) Millard, T.H. et al. (2004) *Biochem J.* 380, 1–17.
- (2) Yan, C. et al. (2003) *EMBO J.* 22, 3602–3612.
- (3) Snapper, S.B. et al. (2001) *Nat. Cell Biol.* 3, 897–904.
- (4) Zhang, J. et al. (1999) *J. Exp. Med.* 190, 1329–4132.
- (5) Suetsugu, S. et al. (1999) *Biochem. Biophys. Res. Commun.* 260, 296–302.
- (6) Sossey-Alaoui, K. et al. (2002) *Oncogene* 21, 5967–5974.
- (7) Sossey-Alaoui, K. et al. (2005) *Exp. Cell Res.* 308, 135–145.
- (8) Sossey-Alaoui, K. et al. (2007) *Am J Pathol* 170, 2112–21.

**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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.