

# Merlin (D3S3W) Rabbit mAb

✓ 100 µl  
 (10 western blots)



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

Applications W, IP, IF-IC Endogenous	Species Cross-Reactivity* H, M, R, Mk, Hm	Molecular Wt. 70 kDa	Isotype Rabbit IgG**
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**Background:** Neurofibromatosis 2 (NF2) is an autosomal dominant, inherited disorder characterized by the occurrence of vestibular schwannomas, meningiomas, and other nervous system tumors. Both the familial tumors of *NF2* and equivalent sporadic tumors found in the general population are caused by inactivation of the *NF2* tumor suppressor gene. Merlin (moesin, ezrin, and radixin-like protein) is the *NF2* gene product, displaying striking similarity to ezrin, radixin, and moesin (ERM) proteins. Regulation of merlin (also called schwannomin) and ERM proteins involves intramolecular and intermolecular head-to-tail associations between family members (1). Merlin and ERM proteins act as linkers between the plasma membrane and the cytoskeleton, affecting cell morphology, polarity, and signal transduction (2). Merlin is phosphorylated by the Rac/Cdc42 effector p21-activated kinase (PAK) at Ser518, negatively regulating Rac (3,4).

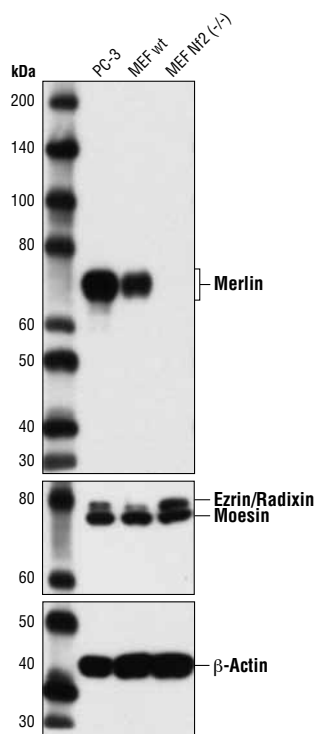
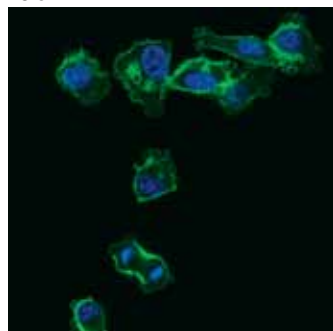
**Specificity/Sensitivity:** Merlin (D3S3W) Rabbit mAb recognizes endogenous levels of total merlin protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gln470 of human merlin protein.

## Background References:

- (1) Ramesh, V. (2004) *Nat. Rev. Neurosci.* 5, 462-470.
- (2) Bretscher, A. et al. (2002) *Nat. Rev. Mol. Cell Biol.* 3, 586-599.
- (3) Xiao, G. H. et al. (2002) *J. Biol. Chem.* 277, 883-886.
- (4) Kissil, J. L. et al. (2003) *Mol. Cell* 12, 841-849.

PC-3



Western blot analysis of extracts from PC-3 cells, and both wild type and Nf2 (-/-) mouse embryonic fibroblasts (MEFs) using Merlin (D3S3W) Rabbit mAb (upper), Ezrin/Radixin/Moesin Antibody #3142 (middle), and β-Actin (D6A8) Rabbit mAb #8457 (lower). (MEF wt and MEF Nf2 (-/-) cells were kindly provided by Dr. Andrea McClatchey and Dr. Andrew Gladden, MGH Cancer Center and Harvard Medical School, Charlestown MA).

◀ Confocal immunofluorescent analysis of PC-3 cells using Merlin (D3S3W) Rabbit mAb (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Entrez Gene ID #4771  
 UniProt ID #P35240

**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.

**\*Species cross-reactivity is determined by western blot.**

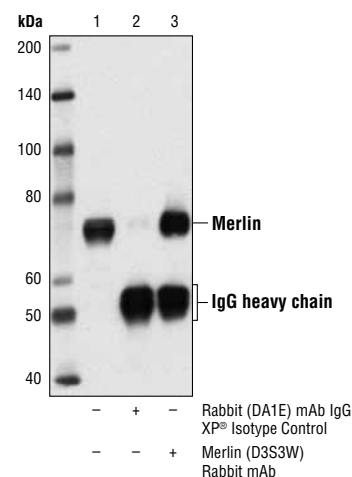
**\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.**

## Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (IF-IC)	1:50
IF Protocol:	Methanol Fixation required

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

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Immunoprecipitation of merlin from mouse embryonic fibroblasts (MEF) cell extracts, using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or Merlin (D3S3W) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using Merlin (D3S3W) Rabbit mAb.

**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.