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Datasheet for 600-401-414

NF2 phospho S518 Antibody

Overview

Description:	Anti-NF2 (Merlin) pS518 (RABBIT) Antibody - 600-401-414
Item No.:	600-401-414
Size:	100 µg
Applications:	ELISA, WB, IF, IHC, Multiplex
Reactivity:	Mouse
Host Species:	Rabbit

Product Details

Background:	The recently isolated neurofibromatosis 2 tumor suppressor gene encodes a 595 amino acid protein (Merlin). The protein product Merlin, named for its relatedness to the ezrin, radixin and moesin (ERM) family of proteins, is a tumor suppressor whose absence results in the occurrence of multiple tumors of the nervous system, particularly schwannomas and meningiomas. Merlin's similarity to ERM's suggests that it might share functions, acting as a link between cytoskeletal components and the cell membrane. The NF2 protein is highly expressed in human fibroblasts and is detected as a single band of about 75kDa. This antibody is specific for the phosphorylated form of human NF2 (Merlin).
Synonyms:	rabbit anti-NF2 pS518 antibody, rabbit anti-Merlin pS518 antibody, moesin ezrin radixin like protein antibody, Neurofibromatosis 2 antibody, Neurofibromin-2, Schwannomerlin, Schwannomin, Merlin, NF 2, NF-2, SCH
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	NF2
Reactivity:	Mouse
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide

Immunogen:	Human NF2 (Merlin) phospho-peptide corresponding to a region of the human protein surrounding S518 and conjugated to Keyhole Limpet Hemocyanin (KLH).
Purity/Specificity:	This affinity purified antibody is directed against human NF2 (Neurofibromatosis 2 gene product). The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. Antiserum was first purified against the phosphorylated form of the immunizing peptide. The resultant affinity purified antibody was then cross-adsorbed against the non-phosphorylated form of the immunizing peptide. This phospho-specific polyclonal antibody is specific for phosphorylated pS518 of human NF2 (neurofibromatosis 2 gene product). Reactivity with non-phosphorylated Human NF2 (Merlin) is minimal by ELISA. Cross-reactivity with NF2 (Merlin) occurs in mouse tissue. Reactivity with NF2 from other sources has not been determined.
Relevant Links:	• NCBI - NP_000259 • UniProtKB - P35240 • GeneID - 4771

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	IF, IHC, Multiplex (Based on references)
Application Note:	This phospho-specific polyclonal antibody was tested by immunoblotting and ELISA. By ELISA, the antibody was found to be reactive with the phosphorylated form of the immunizing peptide and minimally reactive with the non-phosphorylated form of the immunizing peptide. Immunoblotting will detect human and mouse NF2 (Merlin). Although not tested, this antibody is likely functional in Immunofluorescence, immunohistochemistry, and immunoprecipitation.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:1,200,000
IHC:	User Optimized
WB:	1:500- 1:2,000

Formulation

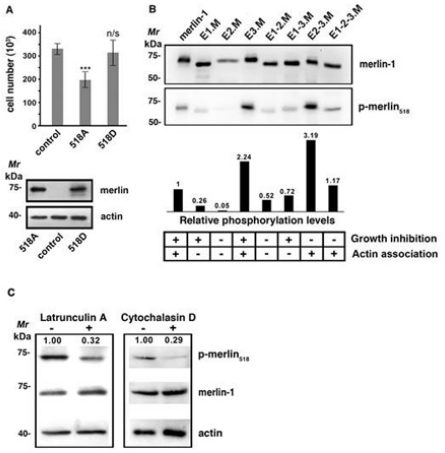
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide

Stabilizer:	None

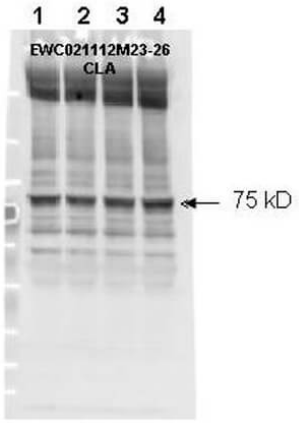
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

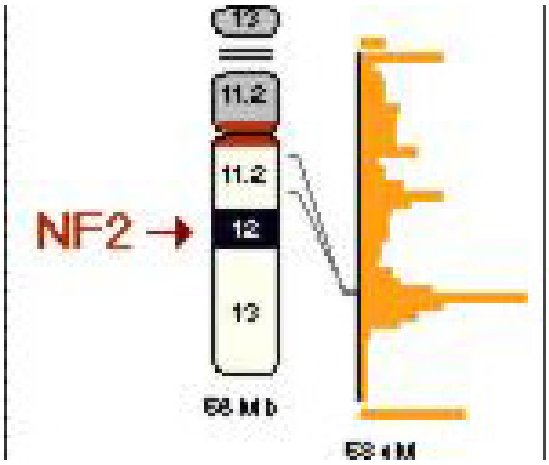
Images



Western Blot
Localization to actin via F1-F2 facilitates merlin-1 phosphorylation on serine 518. (A) Saturation densities of Nf2–/– SC compared with Nf2–/– SC expressing merlin-1 S518A or S518D (***P<0.001; n/s, not significant). The relative levels of re-expression of the two mutants was evaluated by western blot. (B) Western blot analysis of the phosphorylation level of the different ezrin–merlin-1 chimeras is shown in comparison to merlin-1. The western blot at the top was incubated with an anti-merlin antibody (merlin-1). The western blot at the bottom was incubated with an antibody specific to the phosphorylated form of merlin on serine 518 (p-merlin518). Quantification of the ratio of phosphorylated to total merlin-1 is shown in the bar graph. (C) Phosphorylation of merlin-1 on serine 518, 30 minutes after stimulation by 10% FBS in SC treated for 90 minutes with latrunculin A (5 µM) or cytochalasin D (1 µM). Quantification shown presents the ratio of phosphorylated merlin-1 in treated cells relative to untreated cells. Fig 6.
PMID: 19910496



Western Blot
Affinity purified phospho-specific antibody to NF2 (Merlin) at pS518 was used at a 1:1000 dilution to detect NF2 by Western blot. Approximately 12 ul of a mouse cardiac myocyte lysate was loaded per lane on a 4-20% Criterion gel for SDS-PAGE. Samples were either mock treated (lane 1) or CLA treated at 4nM, 20 nM or 100 nM (lanes 2, 3 and 4 respectively) for 45'. After washing, a 1:5,000 dilution of HRP conjugated Gt-a-Rabbit IgG (611-103-122) preceded color development using Amersham's substrate system. Other detection methods will yield similar results.



Pathway

References

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- Hu et al. An FAK-YAP-mTOR Signaling Axis Regulates Stem Cell-Based Tissue Renewal in Mice. *Cell Stem Cell* (2017)
- Lallemand D, Saint-Amaux AL, Giovannini M. Tumor-suppression functions of merlin are independent of its role as an organizer of the actin cytoskeleton in Schwann cells. *J Cell Sci.* (2009)
- Lu J et al. Compensative shuttling of merlin to phosphorylation on serine 518 in vestibular schwannoma. *Laryngscope.* (2008)

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