

Product datasheet

Anti-NF2 / Merlin antibody ab70232

[3 Images](#)

Overview

Product name	Anti-NF2 / Merlin antibody
Description	Rabbit polyclonal to NF2 / Merlin
Host species	Rabbit
Tested applications	Suitable for: WB, IP
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Rabbit, Horse, Cow, Dog, Pig, Ferret, Baboon, Gorilla, Chinese hamster, Orangutan, Elephant 
Immunogen	Synthetic peptide corresponding to a region between C terminal residues 550 and 595 of Human NF2/ Merlin (NP_000259.1) The epitope is common to Human isoforms 1 and 9, and Mouse isoform 1.
Positive control	Whole cell lysate from HeLa or NIH293 cells.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: 1.815% Tris, 1.764% Sodium citrate, 0.021% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab70232 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/5000 - 1/15000. Detects a band of approximately 75 kDa (predicted molecular weight: 70 kDa).

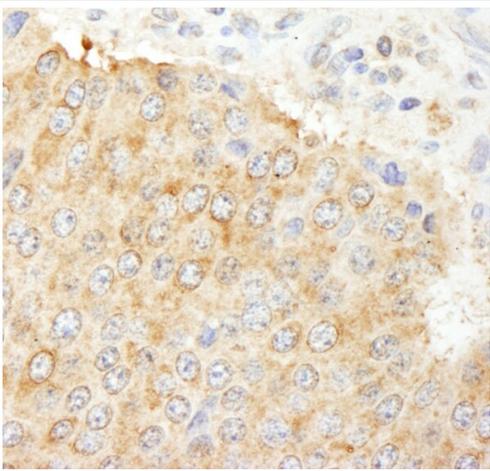
Application	Abreviews	Notes
IP		Use at 1-4 µg/mg of lysate.

Target

Function	Probable regulator of the Hippo/SWH (Sav/Wts/Hpo) signaling pathway, a signaling pathway that plays a pivotal role in tumor suppression by restricting proliferation and promoting apoptosis. Along with WWC1 can synergistically induce the phosphorylation of LATS1 and LATS2 and can probably function in the regulation of the Hippo/SWH (Sav/Wts/Hpo) signaling pathway. May act as a membrane stabilizing protein. May inhibit PI3 kinase by binding to AGAP2 and impairing its stimulating activity. Suppresses cell proliferation and tumorigenesis by inhibiting the CUL4A-RBX1-DDB1-VprBP/DCAF1 E3 ubiquitin-protein ligase complex.
Tissue specificity	Widely expressed. Isoform 1 and isoform 3 are predominant. Isoform 4, isoform 5 and isoform 6 are expressed moderately. Isoform 8 is found at low frequency. Isoform 7, isoform 9 and isoform 10 are not expressed in adult tissues, with the exception of adult retina expressing isoform 10. Isoform 9 is faintly expressed in fetal brain, heart, lung, skeletal muscle and spleen. Fetal thymus expresses isoforms 1, 7, 9 and 10 at similar levels.
Involvement in disease	<p>Defects in NF2 are the cause of neurofibromatosis 2 (NF2) [MIM:101000]; also known as central neurofibromatosis. NF2 is a genetic disorder characterized by bilateral vestibular schwannomas (formerly called acoustic neuromas), schwannomas of other cranial and peripheral nerves, meningiomas, and ependymomas. It is inherited in an autosomal dominant fashion with full penetrance. Affected individuals generally develop symptoms of eighth-nerve dysfunction in early adulthood, including deafness and balance disorder. Although the tumors of NF2 are histologically benign, their anatomic location makes management difficult, and patients suffer great morbidity and mortality.</p> <p>Defects in NF2 are a cause of schwannomatosis (SCHWA) [MIM:162091]; also known as congenital cutaneous neurilemmomatosis. Schwannomas are benign tumors of the peripheral nerve sheath that usually occur singly in otherwise normal individuals. Multiple schwannomas in the same individual suggest an underlying tumor-predisposition syndrome. The most common such syndrome is NF2. The hallmark of NF2 is the development of bilateral vestibular-nerve schwannomas; but two-thirds or more of all NF2-affected individuals develop schwannomas in other locations, and dermal schwannomas may precede vestibular tumors in NF2-affected children. There have been several reports of individuals with multiple schwannomas who do not show evidence of vestibular schwannoma. Clinical report suggests that schwannomatosis is a clinical entity distinct from other forms of neurofibromatosis.</p>
Sequence similarities	Contains 1 FERM domain.
Post-translational modifications	<p>Phosphorylation of Ser-518 inhibits nuclear localization by disrupting the intramolecular association of the FERM domain with the C-terminal tail.</p> <p>Ubiquitinated by the CUL4A-RBX1-DDB1-DCAF1V/prBP E3 ubiquitin-protein ligase complex for ubiquitination and subsequent proteasome-dependent degradation.</p>
Cellular localization	<p>Cytoplasm > perinuclear region. Cytoplasmic granule. Observed in cytoplasmic granules concentrated in a perinuclear location. Isoform 7 is absent from ruffling membranes and filopodia;</p> <p>Cytoplasm > perinuclear region. Cytoplasmic granule. Observed in cytoplasmic granules concentrated in a perinuclear location. Isoform 9 is absent from ruffling membranes and filopodia;</p> <p>Nucleus. Cell projection > filopodium membrane. Cell projection > ruffle membrane. Cytoplasm > perinuclear region. Cytoplasmic granule. Cytoplasm > cytoskeleton. In a fibroblastic cell line, isoform 10 is found homogeneously distributed over the entire cell, with a particularly strong</p>

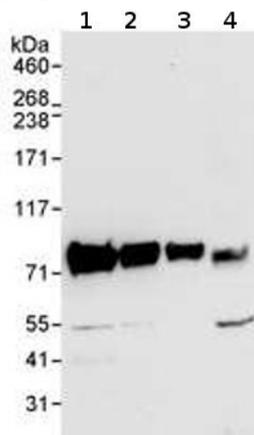
staining in ruffling membranes and filopodia and Cell projection > filopodium membrane. Cell projection > ruffle membrane. Nucleus. In a fibroblastic cell line, isoform 1 is found homogeneously distributed over the entire cell, with a particularly strong staining in ruffling membranes and filopodia. Colocalizes with MPP1 in non-myelin-forming Schwann cells. Binds with VPRBP in the nucleus. The intramolecular association of the FERM domain with the C-terminal tail promotes nuclear accumulation. The unphosphorylated form accumulates predominantly in the nucleus while the phosphorylated form is largely confined to the non-nuclear fractions.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human pancreatic islet cell tumor tissue labelling NF2 / Merlin with ab70232 at 1/1000 (1 µg/ml). Detection: DAB.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NF2 / Merlin antibody (ab70232)



All lanes : Anti-NF2 / Merlin antibody (ab70232) at 0.1 µg/ml

Lane 1 : HeLa whole cell lysate at 50 µg

Lane 2 : HeLa whole cell lysate at 15 µg

Lane 3 : HeLa whole cell lysate at 5 µg

Lane 4 : NIH293 whole cell lysate at 50 µg

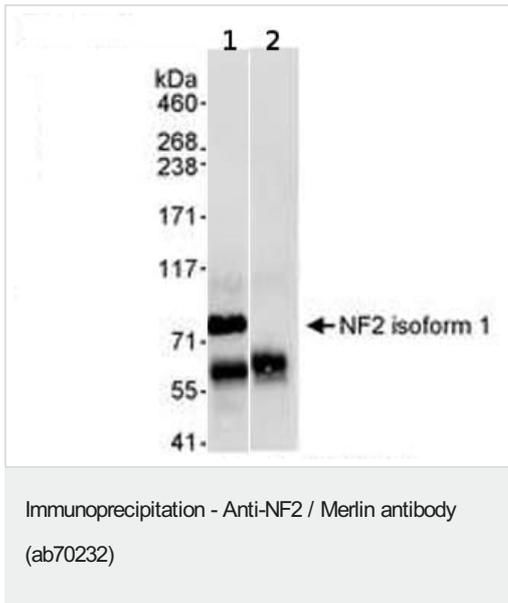
Predicted band size: 70 kDa

Observed band size: 75 kDa

Additional bands at: 55 kDa. We are unsure as to the identity of these extra bands.

Western blot - Anti-NF2 / Merlin antibody (ab70232)

Exposure time: 10 seconds



Lane 1: analysis of HeLa whole cell lysate (1 mg for IP, 1/4 of IP reaction loaded) probed with ab70232 at 1 µg/ml, subsequent to IP with ab70232 at 3 µg/mg lysate.

Lane 2: a rabbit control Ig was used for the IP reaction

Detection: chemiluminescence with an exposure time of 10 seconds.

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