abcam

Product datasheet

Anti-Nesprin 2 antibody ab57397

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概述

产品名称	Anti-Nesprin 2抗体
描述	**小鼠单克隆抗体**to Nesprin 2
经测试应用	**适用于:** WB, ICC/IF, Flow Cyt, IHC-P
种属反应性	**与反应:** Human
免疫原	Recombinant fragment: CRRELMQLEK ELVERQPQVD MLQEISNSLL IKGHGEDCIE AEEKVHVIEK KLKQLREQVS QDLMALQGTQ NPASPLPSFD EVDSGDQPPA TSVPAPRA, corresponding to amino acids 6701-6799 of Human Nesprin 2 Run BLAST with ExPASy Run BLAST with NCBI
常规说明	Abcam is committed to meeting high standards of ethical manufacturing and has decided to discontinue this product by June 2019 as it has been generated by the ascites method. We are sorry for any inconvenience this may cause.

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
存储溶液	Preservative: None PBS, pH 7.2
纯度	Protein G purified
克隆	单克隆
同种型	IgG2b
轻链类型	kappa

应用

Our Abpromise guarantee covers the use of **ab57397** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

应用	Ab评论	说明
WB	★★★★☆	Use a concentration of 1 - 5 µg/ml. This antibody has only been tested in WB against the recombinant fragment used as immunogen. We have no data on the detection of endogenous protein.
ICC/IF		Use a concentration of 10 µg/ml.
Flow Cyt	★☆☆☆☆	Use 1µg for 10^6 cells. ab170192-Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.
IHC-P		Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

靶标

功能

Multi-isomeric modular protein which forms a linking network between organelles and the actin cytoskeleton to maintain the subcellular spatial organization. Component of SUN-protein-containing multivariate complexes also called LINC complexes which link the nucleoskeleton and cytoskeleton by providing versatile outer nuclear membrane attachment sites for cytoskeletal filaments. Involved in the maintenance of nuclear organization and structural integrity. Connects nuclei to the cytoskeleton by interacting with the nuclear envelope and with F-actin in the cytoplasm. Specifically, SYNE2 and SUN2 assemble in arrays of transmembrane actin-associated nuclear (TAN) lines which are bound to F-actin cables and couple the nucleus to retrograde actin flow during actin-dependent nuclear movement. Required for centrosome migration to the apical cell surface during early ciliogenesis.

组织特异性

Widely expressed, with higher level in kidney, adult and fetal liver, stomach and placenta. Weakly expressed in skeletal muscle and brain. Isoform 5 is highly expressed in pancreas, skeletal muscle and heart.

疾病相关

Defects in SYNE2 are the cause of Emery-Dreifuss muscular dystrophy type 5 (EDMD5) [MIM:612999]. A degenerative myopathy characterized by weakness and atrophy of muscle without involvement of the nervous system, early contractures of the elbows, Achilles tendons and spine, and cardiomyopathy associated with cardiac conduction defects.

序列相似性

Belongs to the nesprin family.
Contains 1 actin-binding domain.
Contains 2 CH (calponin-homology) domains.
Contains 1 KASH domain.
Contains 9 spectrin repeats.

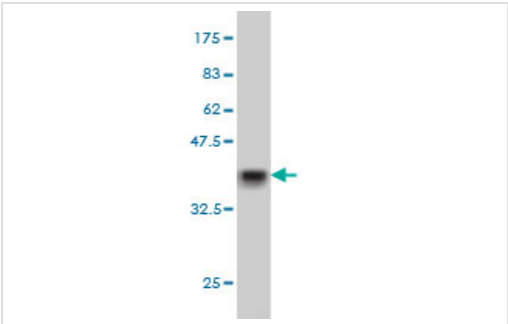
结构域

The KASH domain mediates the nuclear envelope targeting.

细胞定位

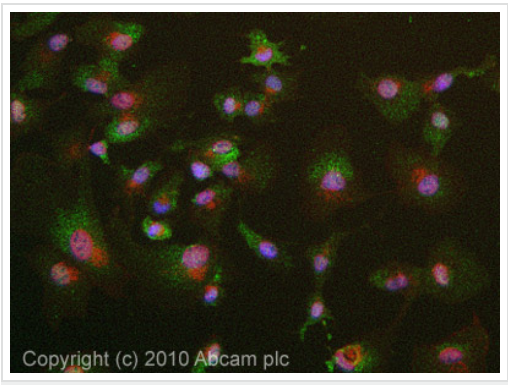
Nucleus outer membrane. Sarcoplasmic reticulum membrane. Cell membrane. Cytoplasm > cytoskeleton. Mitochondrion. Nucleus > nucleoplasm. Different isoform patterns are found in the different compartments of the cell. The isoforms having the C-terminal transmembrane span can be found in several organellar membranes like the nuclear envelope, the sarcoplasmic reticulum of myoblasts, or the lamellipodia and focal adhesions at the cell membrane. The largest part of the outer nuclear membrane-associated protein is cytoplasmic, while its C-terminal part is associated with the nuclear envelope, most probably the outer nuclear membrane. Remains associated with the nuclear envelope during its breakdown in mitotic cells. Shorter solubles isoforms can be found in the cytoplasm and within the nucleus.

图片



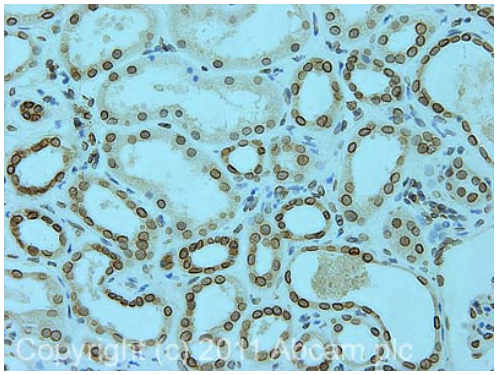
Western blot - Nesprin 2 antibody (ab57397)

Western blot against tagged recombinant protein immunogen using ab57397 Nesprin 2 antibody at 1ug/ml. Predicted band size of immunogen is 37 kDa



Immunocytochemistry/ Immunofluorescence-Nesprin 2 antibody(ab57397)

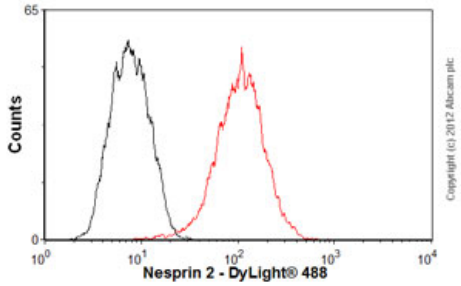
ICC/IF image of ab57397 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab57397, 10µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Nesprin 2 antibody (ab57397)

IHC image of ab57397 staining in human normal kidney formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab57397, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Flow Cytometry-Anti-Nesprin 2 antibody(ab57397)

Overlay histogram showing HepG2 cells stained with ab57397 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab57397, 1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HepG2 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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