

Product datasheet

Anti-Nesprin1/Syne-1 antibody [EPR14196] ab192234

Recombinant **RabMAb**

[4 References](#) [8 Images](#)

Overview

Product name	Anti-Nesprin1/Syne-1 antibody [EPR14196]
Description	Rabbit monoclonal [EPR14196] to Nesprin1/Syne-1
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), ICC/IF, WB, IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	HeLa, 293, HACAT, RAW 264.7, PC12 and NIH 3T3 cell lysates; human kidney, human bladder transitional cell carcinoma and rat stomach tissues; A673 and HACAT cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 59% PBS, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR14196
Isotype	IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab192234 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
Flow Cyt (Intra)		1/40. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF		1/50.
WB		1/1000 - 1/20000. Detects a band of approximately 112 kDa (predicted molecular weight: 112 kDa).
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

Function

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. Required for centrosome migration to the apical cell surface during early ciliogenesis.

Tissue specificity

Widely expressed. Highly expressed in skeletal and smooth muscles, heart, spleen, and peripheral blood leukocytes.

Involvement in disease

Defects in SYNE1 are the cause of spinocerebellar ataxia autosomal recessive type 8 (SCAR8) [MIM:610743]; also known as autosomal recessive cerebellar ataxia type 1 (ARCA1) or recessive ataxia of Beauce. Spinocerebellar ataxia is a clinically and genetically heterogeneous group of cerebellar disorders. Patients show progressive incoordination of gait and often poor coordination of hands, speech and eye movements, due to degeneration of the cerebellum with variable involvement of the brainstem and spinal cord. SCAR8 is an autosomal recessive form. Defects in SYNE1 are the cause of Emery-Dreifuss muscular dystrophy type 4 (EDMD4) [MIM:612998]. 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.

Sequence similarities

Belongs to the nesprin family.
Contains 1 actin-binding domain.
Contains 2 CH (calponin-homology) domains.
Contains 12 HAT repeats.
Contains 1 KASH domain.
Contains 31 spectrin repeats.

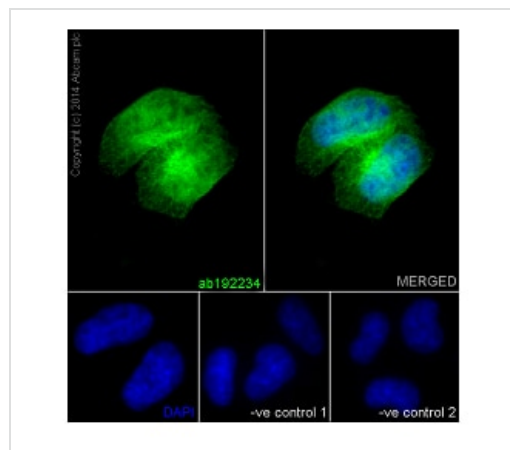
Domain

The KASH domain, which contains a transmembrane domain, mediates the nuclear envelope targeting and is involved in the binding to SUN1 and SUN2 through recognition of their SUN domains.

Cellular localization

Nucleus outer membrane. Cytoplasm > cytoskeleton. Cytoplasm > myofibril > sarcomere. The largest part of the protein is cytoplasmic, while its C-terminal part is associated with the nuclear envelope, most probably the outer nuclear membrane. In skeletal and smooth muscles, a significant amount is found in the sarcomeres.

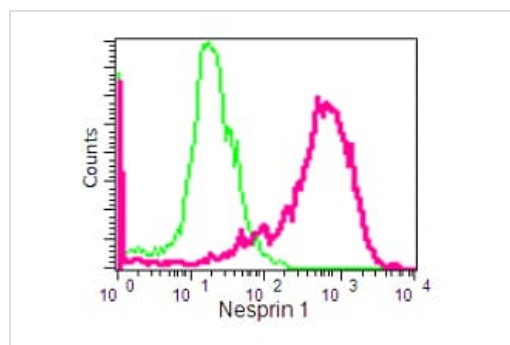
Images



Immunocytochemistry/ Immunofluorescence - Anti-Nesprin1/Syne-1 antibody [EPR14196] (ab192234)

Immunofluorescent analysis of A673 cells (4% Paraformaldehyde-fixed, 0.1% tritonX-100 permeabilized) labeling Nesprin1/Syne-1 with ab192234 at 1/50 dilution (4.3µg/mL) followed by Goat anti rabbit IgG (AlexaFluor® 488) (ab150077) secondary at 1/200 dilution; counter-stained with DAPI (blue).

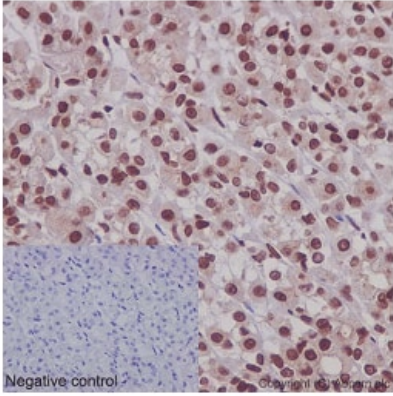
Negative controls: anti-Nesprin1/Syne-1 at 1/50 dilution, Secondary ab (Goat anti mouse IgG (Alexa Fluor®594)) at 1/400 dilution.



Flow Cytometry (Intracellular) - Anti-Nesprin1/Syne-1 antibody [EPR14196] (ab192234)

Intracellular flow cytometric analysis of HACAT cells

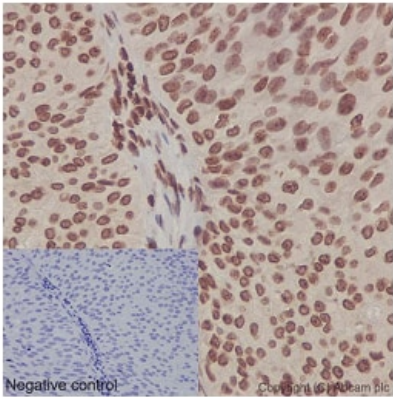
(paraformaldehyde-fixed, 2%) labeling Nesprin1/Syne-1 with ab192234 at 1/40 dilution (red) or a rabbit IgG (negative) (green), followed by Goat anti rabbit IgG (FITC) secondary at 1/150 dilution.



Immunohistochemical analysis of paraffin-embedded Rat stomach tissue labeling Nesprin1/Syne-1 with ab192234 at 1/250 dilution followed by pre-diluted HRP Polymer for Rabbit/Mouse IgG secondary antibody and counter-stained with Hematoxylin. (inset: negative control).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

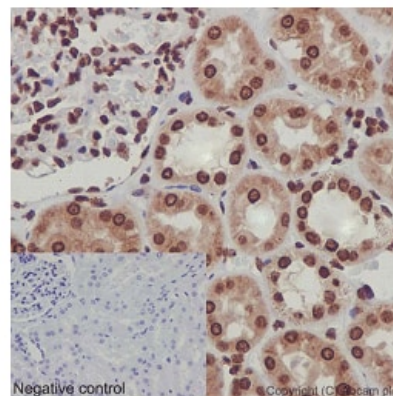
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nesprin1/Syne-1 antibody [EPR14196] (ab192234)



Immunohistochemical analysis of paraffin-embedded Human bladder transitional cell carcinoma tissue labeling Nesprin 1/Syne-1 with ab192234 at 1/250 dilution followed by pre-diluted HRP Polymer for Rabbit/Mouse IgG secondary antibody and counter-stained with Hematoxylin. (inset: negative control).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

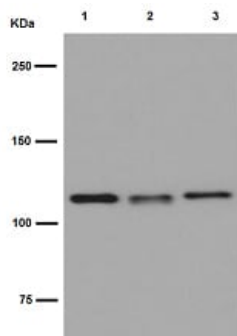
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nesprin1/Syne-1 antibody [EPR14196] (ab192234)



Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling Nesprin 1/Syne-1 with ab192234 at 1/250 dilution followed by pre-diluted HRP Polymer for Rabbit/Mouse IgG secondary antibody and counter-stained with Hematoxylin. (inset: negative control).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nesprin1/Syne-1 antibody [EPR14196] (ab192234)



Western blot - Anti-Nesprin1/Syne-1 antibody [EPR14196] (ab192234)

All lanes : Anti-Nesprin1/Syne-1 antibody [EPR14196] (ab192234) at 1/1000 dilution

Lane 1 : RAW 264.7 cell lysate

Lane 2 : PC12 cell lysate

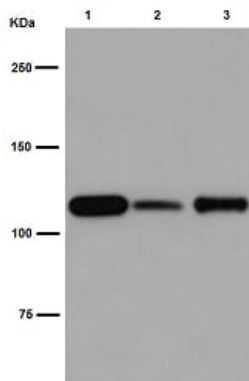
Lane 3 : NIH 3T3 cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Predicted band size: 112 kDa



Western blot - Anti-Nesprin1/Syne-1 antibody [EPR14196] (ab192234)

All lanes : Anti-Nesprin1/Syne-1 antibody [EPR14196] (ab192234) at 1/20000 dilution

Lane 1 : HeLa cell lysate

Lane 2 : 293 cell lysate

Lane 3 : HACAT cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Predicted band size: 112 kDa

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Nesprin1/Syne-1 antibody [EPR14196]
(ab192234)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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