Anti-Nesprin 1 Antibody [JB35-26]

ET7107-28

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IF-Tissue, IHC-P, FC
Molecular Wt:	Predicted band size: 1,011 kDa
Clone number:	JB35-26

Description: Enaptin also known as nesprin-1 or synaptic nuclear envelope protein 1 (syne-1) is an actin-binding protein that in humans that is encoded by the SYNE1 gene. This gene encodes a spectrin repeat containing protein expressed in skeletal and smooth muscle, and peripheral blood lymphocytes, that localizes to the nuclear membrane. Enaptin is a nuclear envelope protein found in human myocytes and synapses, which is made up of 8,797 amino acids. Enaptin is involved in the maintenance of nuclear organization and structural integrity, tethering the cell nucleus to the cytoskeleton by interacting with the nuclear envelope and with F-actin in the cytoplasm. Enaptin contains a coiled alpha-helical region and a large beta-sheet region in the upper part and at least four alpha-helices spliced together, indicating the similarity with collagen. The molecular weight of the mature protein is approximately 1,011 kDa, and it has a theoretical pI of 5.38. It has a theoretical Instability Index (II) of 51.63, indicating that it would be unstable in a test tube. The protein's in vivo half-life, the time it takes for half of the amount of protein in a cell to disappear after its synthesis in the cell, is predicted to be approximately 30 hours (in mammalian reticulocytes).

Immunogen: Synthetic peptide within Human Nesprin 1 aa 8,241-8,290 / 8,797.

Positive control: A549, mouse spleen tissue lysate, C2C12, HUVEC, rat brain tissue, human tonsil tissue, human colon cancer tissue, human kidney tissue, mouse fallopian tubes tissue, Daudi.

Subcellular location: Cytoskeleton. Nucleus.

Database links: SwissProt: Q8NF91 Human | Q6ZWR6 Mouse
Entrez Gene: 499010 Rat

Recommended Dilutions:

WB	1:500-1:2,000
IF-Cell	1:200-1:1,000
IHC-P	1:50-1:200
FC	1:50-1:100

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

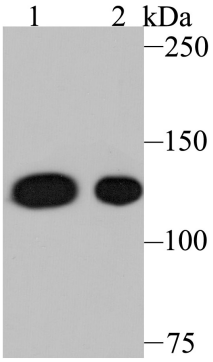

Fig1: Western blot analysis of Nesprin 1 on different lysates using anti-Nesprin 1 antibody at 1/500 dilution.
Positive control:
Lane 1: A549 cell lysate
Lane 2: Mouse spleen tissue lysate

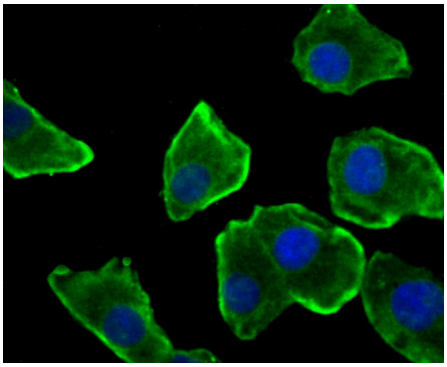

Fig2: ICC staining Nesprin 1 in A549 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

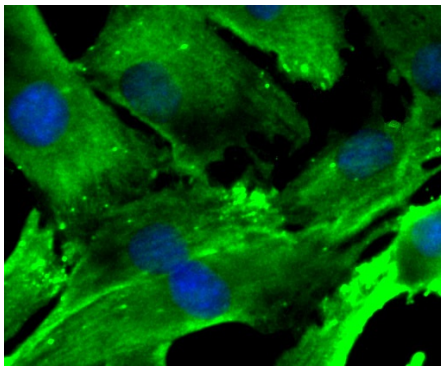

Fig3: ICC staining Nesprin 1 in C2C12 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

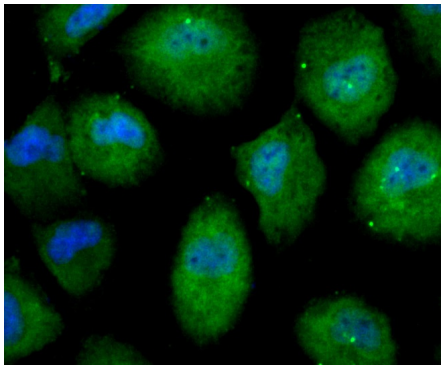

Fig4: ICC staining Nesprin 1 in HUVEC cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

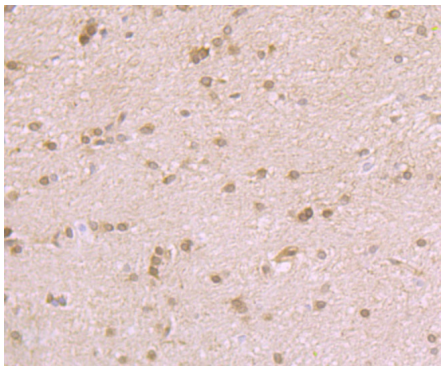

Fig5: Immunohistochemical analysis of paraffin-embedded rat brain tissue using anti-Nesprin 1 antibody. Counter stained with hematoxylin.

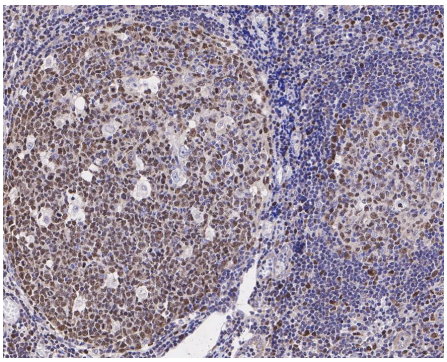

Fig6: Immunohistochemical analysis of paraffin-embedded human tonsil tissue with Rabbit anti-Nesprin 1 antibody (ET7107-28) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET7107-28) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

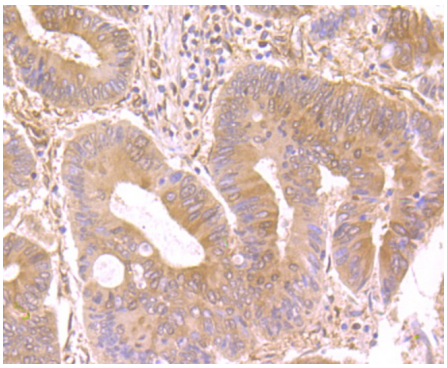

Fig7: Immunohistochemical analysis of paraffin-embedded human colon cancer tissue using anti-Nesprin 1 antibody. Counter stained with hematoxylin.

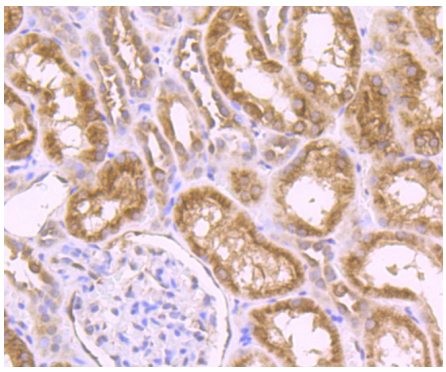

Fig8: Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-Nesprin 1 antibody. Counter stained with hematoxylin.

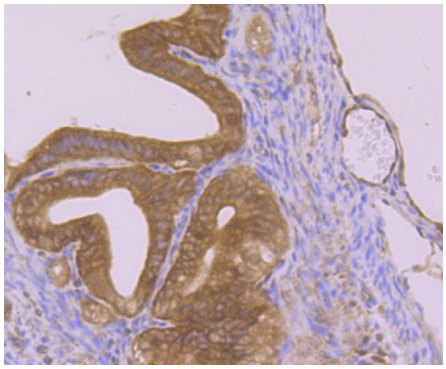

Fig9: Immunohistochemical analysis of paraffin-embedded mouse fallopian tubes tissue using anti-Nesprin 1 antibody. Counter stained with hematoxylin.

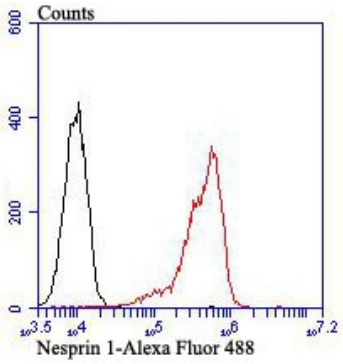

Fig10: Flow cytometric analysis of Daudi cells with Nesprin 1 antibody at 1/100 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody; black).Alexa Fluor 488-conjugated goat anti-rabbit IgG was used as the secondary antibody.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Zhang Q et al. Nesprins: a novel family of spectrin-repeat-containing proteins that localize to the nuclear membrane in multiple tissues. J Cell Sci 114:4485-4498 (2001).
2. Stewart-Hutchinson P J et al. Structural requirements for the assembly of LINC complexes and their function in cellular mechanical stiffness. Exp Cell Res 314: 1892-1905 (2008).