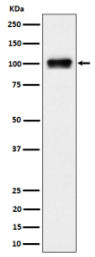
SYNE3 Antibody / Nesprin 3 [clone 30S37] (FY12952)

Catalog No.	Formulation	Size
FY12952	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	30S37
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q6ZMZ3
Applications	Western blot: 1:500-1:2000
Limitations	This SYNE3 antibody is available for research use only.



Western blot analysis of Nesprin 3 expression in human 293 cell lysate using SYNE3 antibody. A single band is detected at ~100 kDa, running slightly below the ~112 kDa prediction. The migration is consistent with the reported nesprin-3 isoform pattern (long form ~108-112 kDa, short form ~95-105 kDa) and the faster apparent mobility of coiled-coil nesprins on SDS-PAGE.

Description

SYNE3 antibody detects Nesprin 3, encoded by the SYNE3 gene. This protein belongs to the spectrin repeat containing nuclear envelope protein family and is a component of the LINC complex, which connects the nuclear envelope to the cytoskeleton. Unlike other family members that link directly to actin filaments, Nesprin 3 connects to intermediate

filaments through partners such as plectin, providing a unique bridge between the nucleus and cytoskeletal structures. Researchers use SYNE3 antibody to investigate nuclear positioning, mechanotransduction, and the maintenance of structural integrity across diverse cell types.

The LINC complex serves as a conduit for mechanical signals transmitted between the cytoplasm and the nucleus. By anchoring the nuclear envelope to cytoskeletal elements, Nesprin3 helps stabilize nuclear shape and position during migration, mitosis, and differentiation. When detected with SYNE3 antibody, changes in its expression or distribution can be correlated with altered mechanosensing and transcriptional regulation. These processes are essential for proper tissue development and for cellular responses to physical stress, making the study of SYNE3 protein highly relevant to mechanobiology.

Dysregulation of nuclear envelope proteins contributes to a variety of diseases, including muscular dystrophies, cardiomyopathies, and neurological disorders. Although more attention has historically focused on Nesprin1 and Nesprin2, studies suggest that Nesprin 3 also participates in these pathways by weakening nuclear anchorage when perturbed. SYNE3 antibody enables detection of protein alterations in both healthy and diseased tissue, providing a means to assess its contribution to pathogenesis. Evidence has also linked SYNE3 to cancer progression, where nuclear deformability affects metastatic cell migration through dense tissue matrices.

SYNE3 antibody is widely used in western blotting, immunofluorescence, and immunohistochemistry. In western blotting, it detects protein levels across tissue lysates, while immunofluorescence confirms its nuclear envelope localization in cultured cells. Immunohistochemistry highlights expression patterns in tissues such as muscle, skin, and epithelium, reflecting its role in nuclear architecture. Functional studies using SYNE3 antibody in knockdown and rescue experiments have demonstrated how loss of the protein disrupts nuclear positioning and cell motility, reinforcing its role in structural and signaling networks.

By providing validated SYNE3 antibody reagents, NSJ Bioreagents supports research into nuclear envelope biology, cytoskeletal connections, and disease mechanisms. Accurate detection of this nuclear envelope protein allows scientists to investigate how mechanical forces shape gene expression, development, and pathological states.

Application Notes

Optimal dilution of the SYNE3 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Nesprin3 was used as the immunogen for the SYNE3 antibody.

Storage

Store the SYNE3 antibody at -20oC.

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