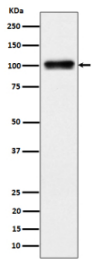
Nesprin 3 Antibody / SYNE3 [clone 30S39] (FY13047)

Catalog No.	Formulation	Size
FY13047	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	30S39
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 Nesprin 3 antibody is available for research use only.



Western blot analysis of Nesprin 3 expression in human 293 cell lysate using Nesprin 3 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

Nesprin 3 antibody detects Spectrin repeat containing nuclear envelope protein 3, encoded by the SYNE3 gene. This protein, commonly known as Nesprin 3, is a component of the linker of nucleoskeleton and cytoskeleton (LINC) complex that spans the nuclear envelope. Unlike other Nesprin family members that link directly to actin, Nesprin 3 connects to

intermediate filaments through interactions with plectin. Nesprin 3 antibody provides researchers with a key reagent to study nuclear positioning, mechanotransduction, and cytoskeletal organization.

The LINC complex plays a central role in transmitting mechanical forces between the cytoskeleton and the nucleus. By tethering the nuclear envelope to intermediate filament networks, Nesprin 3 contributes to nuclear anchorage during migration, differentiation, and mitosis. Research using Nesprin 3 antibody has shown that loss of this protein disrupts nuclear shape and mechanosensing, leading to altered transcriptional responses. These findings emphasize the importance of Nesprin 3 in structural integrity and gene regulation.

Dysfunction of Nesprin proteins, including Nesprin 3, has been linked to muscular dystrophies, cardiomyopathies, and neurological disorders. While most studies have focused on Nesprin 1 and Nesprin 2, evidence suggests that Nesprin 3 contributes to nuclear envelope stability and tissue homeostasis. Studies using Nesprin 3 antibody have associated its altered expression with cancer progression, where changes in nuclear deformability affect invasion and metastasis. These roles highlight the significance of SYNE3 in both health and disease.

Nesprin 3 antibody is widely applied in western blotting, immunofluorescence, and immunohistochemistry. Western blotting demonstrates isoform expression, immunofluorescence shows its localization at the nuclear envelope, and immunohistochemistry reveals its distribution in tissues such as muscle, epithelium, and nervous system. Functional studies have employed Nesprin 3 antibody in knockdown and rescue experiments, linking its absence to nuclear detachment and impaired motility.

By providing validated Nesprin 3 antibody reagents, NSJ Bioreagents supports research into nuclear envelope biology, cytoskeletal dynamics, and disease. Detection of Spectrin repeat containing nuclear envelope protein 3 ensures that researchers can explore how nuclear anchorage and mechanotransduction contribute to cellular function and pathology.

Application Notes

Optimal dilution of the Nesprin 3 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Nesprin3 was used as the immunogen for the Nesprin 3 antibody.

Storage

Store the Nesprin 3 antibody at -20oC.

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