

Product datasheet for **AM33013PU-N**

Syne3 (Alpha) Mouse Monoclonal Antibody [Clone ID: Nsp-3]

Product data:

Product Type:	Primary Antibodies
Clone Name:	Nsp-3
Applications:	IF, IHC, WB
Recommended Dilution:	Immunoblotting. Immunofluorescence. Immunohistochemistry on Frozen Sections: Nsp3 is useful for immunohistochemistry on Frozen tissues and Cell cultures fixed with methanol, or 4% paraformaldehyde combined with a permeabilization step of 15' in 0.1% Triton in PBS. <i>Recommended Dilutions:</i> 1/100-1/1000 with Avidin-Biotinylated horseradish peroxidase Complex (ABC) as detection reagent.
Reactivity:	Mouse
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	GST fusion protein encoding the seventh spectrin repeat of NSP-3a.
Specificity:	The Nsp3 monoclonal antibody reacts specifically with Nesprin-3a.
Formulation:	PBS State: Purified State: Liquid purified IgG fraction Preservative: 0.09% Sodium Azide
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freeze-thaw cycles.
Stability:	Shelf life: One year from despatch.
Gene Name:	spectrin repeat containing, nuclear envelope family member 3
Database Link:	Entrez Gene 212073 Mouse Q4FZC9



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Background:

Nesprin-3, is a member of the nesprin family and is a transmembrane protein of the outer nuclear membrane (ONM). Like Nesprin-1 and Nesprin-2, Nesprin-3 also contains a COOH-terminal klarsicht/ANC-1/syne (KASH) domain and a series of spectrin repeats. In humans, the full length nesprin-1 and nesprin-2 are giant proteins, containing both an actin-binding domain resulting in molecular masses of respectively 976 and 764 kDa.

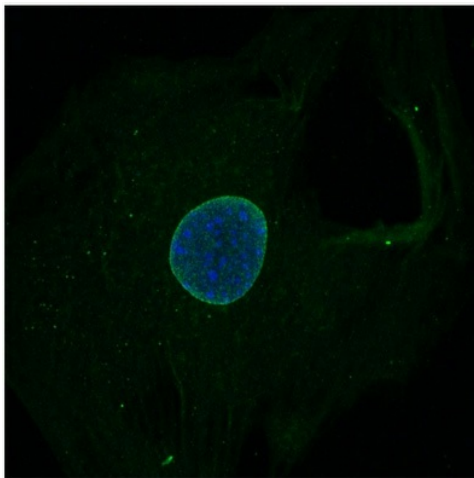
These proteins are therefore suggested to be involved in nuclear positioning. Nesprin-3, in contrast to Nesprin-1 and Nesprin-2, lacks the actin-binding domain and cannot bind directly to the cytoskeleton. Nesprin-3 has two isoforms, Nesprin-3a and Nesprin-3b, which differ in the N-terminus. The N-terminus of Nesprin-3a, but not that of Nesprin-3b interacts with the cytoskeletal crosslinker protein Plectin.

Plectin influences the structural organization and integrity of the cytoskeleton and is thought to assist in the mechanical strengthening of the cells. Plectin binds to nesprin-3a and to the intermediate filaments through its C-terminus, suggesting that the interaction between nesprin-3a and plectin links the nucleus to the intermediate filament system. Nesprin-3, like Nesprin-1 and Nesprin-2 is localized in the nuclear envelope.

This localization is due to its interaction with SUN proteins, both SUN-1 and SUN-2, present in the inner nuclear membrane.

Synonyms:

C14orf49

Product images:

Immunofluorescence staining of a cultured Mouse embryonic fibroblast with Nsp3 for nesprin-3a (green), and counter-staining of nuclear DNA with DAPI (blue).