

Mouse anti-Mouse Nesprin Monoclonal Antibody

Mouse anti Nesprin

CATALOG # AAA77504	HOST Mouse	REACTIVITY Mouse	APPLICATIONS Immunohistochemistry
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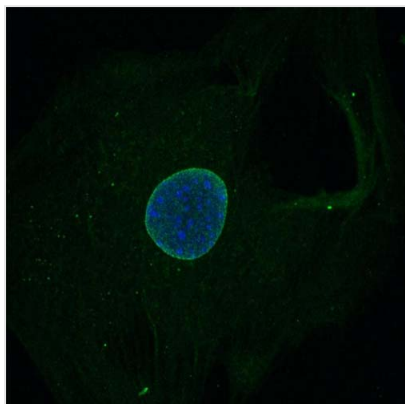
PRODUCT SYNONYMS

Nesprin; Monoclonal Antibody; Mouse anti Nesprin; anti-Nesprin antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Mouse
Clonality	Monoclonal
Isotype	IgG
Clone Number	Nsp-3
Specificity	Nsp3 reacts specifically with nesprin-3a.
Form/Format	Each vial contains 100ul 1 mg/ml purified monoclonal antibody in PBS containing 0.09% sodium azide.
Applicable Applications for anti-Nesprin antibody	IHC (Immunohistochemistry)
Source Note	Nsp3 is a Mouse monoclonal antibody made by immunization of Balb/c mice with the GST fusion protein encoding the seventh spectrin repeat of NSP-3a.
Preparation and Storage	The antibody is shipped at ambient temperature and may be stored at +4°C. For prolonged storage prepare appropriate aliquots and store at or below -20°C. Prior to use, an aliquot is thawed slowly in the dark at ambient temperature, spun down again and used to prepare working dilutions by adding sterile phosphate buffered saline (PBS, pH 7.2). Repeated thawing and freezing should be avoided. Working dilutions should be stored at +4°C, not refrozen, and preferably used the same day. If a slight precipitation occurs upon storage, this should be removed by centrifugation. It will not affect the performance or the concentration of the product.

IMAGES



Application Data

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

ADDITIONAL INFORMATION

Related Product Information for anti-Nesprin antibody	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 Nsp3 monoclonal antibody reacts specifically with nesprin-3a. 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.
Product Categories/Family for anti-Nesprin antibody	Membrane; Cytoskeleton
References	Wilhelmsen, K., Litjens, S., Kuikman, I., Tshimbalanga N., Janssen, H., van den Bout, I., Raymond, K., and Sonnenberg, A., (2005) Nesprin-3, a novel outer nuclear membrane protein, associates with the cytoskeletal linker protein plectin. J Cell Biol 171(5), 799-810. Ketema, M., Wilhelmsen, K., Kuikman, I., Janssen, H., Hodzic, D., and Sonnenberg, A. (2007). Requirements for the localization of nesprin-3 at the nuclear envelope and its interaction with plectin. J Cell Sci 120 (19), 3384-94. Postel, R., Ketema, M., Kuikman, I., de Pereda J., and Sonnenberg A., (2010). Nesprin-3 augments peripheral nuclear localization of intermediate filaments in zebrafish. J Cell Sci 124(5), 755-64.

NCBI AND UNIPROT INFORMATION

NCBI GI #	167878104
NCBI Official Full Name	nesprin

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.