

Rabbit Nesprin 2/SYNE2 Polyclonal Antibody | anti-SYNE2 antibody

Anti-Nesprin 2/SYNE2 Antibody Picoband

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19782	Rabbit	Human, Monkey	ELISA, Flow Cytometry, Functional Assay, Immunofluorescence, Immunohistochemistry, Immunocytochemistry, Western Blot

PRODUCT SYNONYMS

Nesprin 2/SYNE2; Polyclonal Antibody; Anti-Nesprin 2/SYNE2 Antibody Picoband; Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 2; protein inhibitor of activated STAT 3; E3 SUMO-protein ligase PIAS3; Protein inhibitor of activated STAT protein 3; PIAS3; anti-SYNE2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Monkey
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Widely expressed.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Applicable Applications for anti-SYNE2 antibody	ELISA, FCM/FACS (Flow Cytometry), IF (Immunofluorescence), IHC (Immunohistochemistry), ICC (Immunocytochemistry), WB (Western Blot)
Application Notes	WB: 0.25-0.5ug/ml, Human, Monkey IHC(Paraffin-embedded Section): 2-5ug/ml, Human ICC/IF: 5ug/ml, Human FC/FACS (Fixed): 1-3ug/1x10 ⁶ cells, Human ELISA: 0.1-0.5ug/ml
Immunogen	E coli-derived human Nesprin 2/SYNE2 recombinant protein (Position: Q3765-Q5590).
Subcellular Localization	Cytoplasm
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.
Protein Function	Functions as an E3-type small ubiquitin-like modifier (SUMO) ligase, stabilizing the interaction between UBE2I and the substrate, and as a SUMO-tethering factor. Plays a crucial role as a transcriptional coregulation in various cellular pathways, including the STAT pathway and the steroid hormone signaling pathway. Involved in regulating STAT3 signaling via inhibiting STAT3 DNA-binding and suppressing cell growth. Enhances the sumoylation of MTA1 and may participate in its paralog-selective sumoylation (PubMed:21965678, PubMed:9388184). Sumoylates CCAR2 which promotes its interaction with SIRT1 (PubMed:25406032). Diminishes the sumoylation of ZFH3 by preventing the colocalization of ZFH3 with SUMO1 in the nucleus (PubMed:24651376).
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.



FCM (Flow Cytometry)

Figure 6. Flow Cytometry analysis of U87 cells using anti-Nesprin 2/SYNE2 antibody (AAA19782). Overlay histogram showing U87 cells stained with AAA19782 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Nesprin 2/SYNE2 Antibody (AAA19782, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



IF (Immunofluorescence)

Figure 5. IF analysis of Nesprin 2/SYNE2 using anti-Nesprin 2/SYNE2 antibody (AAA19782). Nesprin 2/SYNE2 was detected in an immunocytochemical section of Hela cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Nesprin 2/SYNE2 Antibody (AAA19782) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Nesprin 2/SYNE2 Antibody (AAA19782) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Nesprin 2/SYNE2 Antibody (AAA19782) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Lane 2: human placenta tissue lysates, Lane 3: monkey COS-7 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Nesprin 2/SYNE2 antigen affinity purified polyclonal antibody (#AAA19782) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Nesprin 2/SYNE2 at approximately 50-60 kDa. The expected band size for Nesprin 2/SYNE2 is at 796 kDa.

ADDITIONAL INFORMATION

Related Product Information for anti-SYNE2 antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product Categories/Family for anti-SYNE2 antibody	Primary Antibodies; Cell Biology; Co-Activators/Co-Repressors; Epigenetics and Nuclear Signaling; Nuclear Receptors; Nuclear Signaling Pathways; Proteasome/Ubiquitin; Proteolysis/Ubiquitin; Transcription; Transcription Factors; Ubiquitin & Ubiquitin Like
References	1. Apel, E. D., Lewis, R. M., Grady, R. M., Sanes, J. R. Syne-1, a dystrophin- and Klarsicht-related protein associated with synaptic nuclei at the neuromuscular junction. J. Biol. Chem. 275: 31986-31995, 2000.2. Libotte, T., Zaim, H., Abraham, S., Padmakumar, V. C., Schneider, M., Lu, W., Munck, M., Hutchison, C., Wehnert, M., Fahrenkrog, B., Sauder, U., Aeby, U., Noegel, A. A., Karakesisoglou, I. Lamin A/C-dependent localization of nesprin-2, a giant scaffold at the nuclear envelope. Molec. Biol. Cell 16: 3411-3424, 2005. 3. Maddox, D. M., Collin, G. B., Ikeda, A., Pratt, C. H., Ikeda, S., Johnson, B. A., Hurd, R. E., Shopland, L. S., Naggert, J. K., Chang, B., Krebs, M. P., Nishina, P. M. A mutation in Syne2 causes early retinal defects in photoreceptors, secondary neurons, and Mueller glia. Invest. Ophthalmol. Vis. Sci. 56: 3776-3787, 2015.

NCBI AND UNIPROT INFORMATION

NCBI GI #	33624861
NCBI GeneID	23224
NCBI Accession #	NP_878914.1
NCBI GenBank Nucleotide #	NM_182910.2
UniProt Accession #	Q8WXH0; Q540G1; Q8N1S3; Q8NF49; Q8TER7; Q8WWW3; Q8WWW4; Q8WWW5; Q8WXH1; Q9NU50; Q9UFQ4 ; Q9Y2L4
Molecular Weight	796,442 Da

NCBI Official Full Name	nesprin-2 isoform 2
NCBI Official Synonym Full Names	spectrin repeat containing, nuclear envelope 2
NCBI Official Symbol	SYNE2
NCBI Official Synonym Symbols	NUA; EDMD5; Nesp2; TROPH; NUANCE; SYNE-2; Nesprin-2
NCBI Protein Information	nesprin-2; nesprin 2; polytrophin; synaptic nuclei expressed gene 2; synaptic nuclear envelope protein 2; nuclear envelope spectrin repeat protein 2; nucleus and actin connecting element protein
UniProt Protein Name	Nesprin-2
UniProt Gene Name	SYNE2
UniProt Synonym Gene Names	KIAA1011; NUA; Protein NUANCE; Syne-2
UniProt Entry Name	SYNE2_HUMAN

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.

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