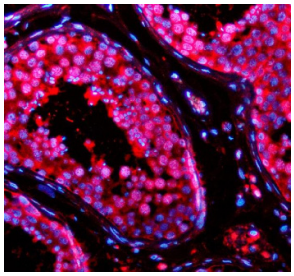
Translin Antibody / TSN (FY13367)

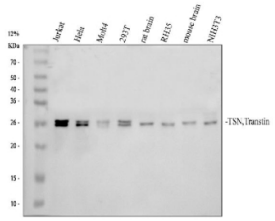
Catalog No.	Formulation	Size
FY13367	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

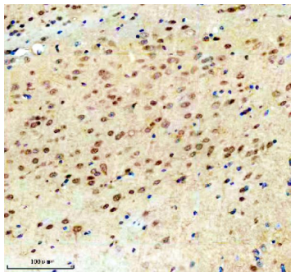
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q15631
Localization	Cytoplasm, Nucleus
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This Translin antibody is available for research use only.



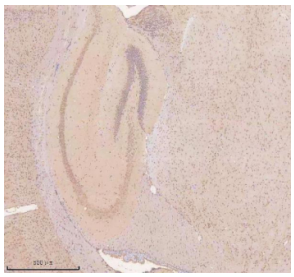
Immunofluorescent staining of TSN using anti-Translin antibody (red). TSN was detected in a paraffin-embedded section of human testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-Translin antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



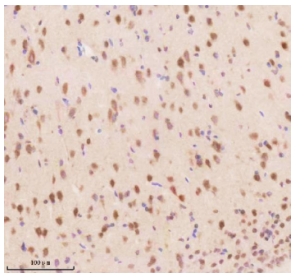
Western blot analysis of TSN using anti-Translin antibody. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Jurkat whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human MOLT-4 whole cell lysates, Lane 4: human 293T whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: rat RH35 whole cell lysates, Lane 7: mouse brain tissue lysates, Lane 8: mouse NIH/3T3 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-Translin antibody at 0.5 ug/ml overnight at 4oC, 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 was developed using an ECL Plus Western Blotting Substrate. A specific band was detected for TSN at approximately 26 kDa. The expected molecular weight of TSN is ~26 kDa.



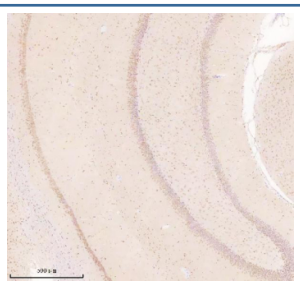
Immunohistochemical staining of TSN using anti-Translin antibody. TSN was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Translin antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



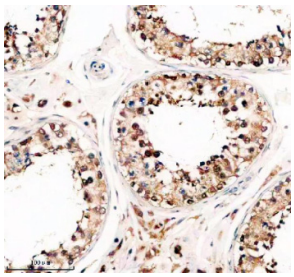
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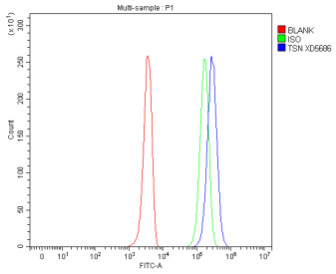
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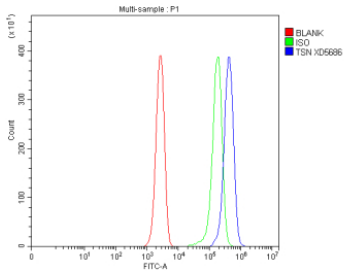
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Immunohistochemical staining of TSN using anti-Translin antibody. TSN was detected in a paraffin-embedded section of human testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Translin antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Flow Cytometry analysis of 293T cells using anti-Translin antibody. Overlay histogram showing 293T cells stained with (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-Translin antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Flow Cytometry analysis of Jurkat cells using anti-Translin antibody. Overlay histogram showing Jurkat cells stained with (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-Translin antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

Translin antibody detects Translin, a highly conserved RNA and DNA-binding protein encoded by the TSN gene located on chromosome 2q11.2. Translin functions as part of the RNA processing and transport machinery, forming a complex with Trax (TSNAX) to create the C3PO (component 3 promoter of RNA-induced silencing complex) ribonuclease. This complex plays a key role in the RNA interference (RNAi) pathway by promoting the removal of passenger strands from small interfering RNAs (siRNAs), thereby facilitating gene silencing. Translin is ubiquitously expressed, with high levels found in neurons, testes, and lymphoid tissues where RNA transport and regulation are crucial.

Structurally, Translin assembles into an octameric ring that binds nucleic acids in a sequence-independent manner. It contains a central RNA/DNA-binding domain and regions that mediate oligomerization and association with Trax. Together, Translin and Trax form the C3PO complex, which promotes RNA-induced silencing by accelerating siRNA duplex unwinding. Translin belongs to the Translin family of RNA-binding proteins that regulate post-transcriptional processes across multiple tissues.

Functionally, Translin acts in mRNA transport, localization, and stabilization. In neurons, it regulates axonal mRNA transport and local translation critical for synaptic plasticity. It also participates in DNA double-strand break repair and chromosomal translocation control, linking RNA metabolism to genome maintenance. Through the C3PO complex, Translin contributes to RNAi efficiency and microRNA (miRNA) processing, ensuring proper post-transcriptional gene regulation. Known binding partners include TSNAX (Trax), AGO2, and Dicer, all involved in RNA interference and processing.

Translin expression is developmentally regulated, peaking during neuronal maturation and spermatogenesis. In germ cells, it contributes to mRNA trafficking essential for gametogenesis. In immune cells, it regulates cytokine mRNA stability

and turnover. Dysregulation of Translin has been linked to neurodevelopmental disorders and cancers, where aberrant RNA regulation and chromosomal rearrangements contribute to disease progression. Pathway associations include RNA transport, RNA interference, and DNA damage repair signaling.

The Translin antibody from NSJ Bioreagents is a valuable reagent for studying RNA-binding proteins, post-transcriptional gene regulation, and the RNAi machinery.

Application Notes

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

Immunogen

E.coli-derived human TSN recombinant protein (Position: A16-D211) was used as the immunogen for the Translin antibody.

Storage

After reconstitution, the Translin antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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