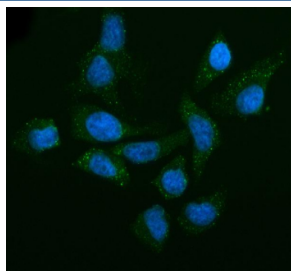


LSM14A Antibody / RAP55 / AlphaSNBP (FY12475)

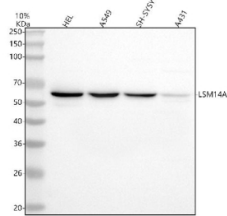
Catalog No.	Formulation	Size
FY12475	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

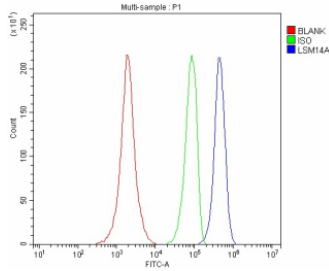
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	Q8ND56
Localization	Cytoplasm (P-body, stress granule)
Applications	Western Blot : 0.25-0.5ug/ml Immunoprecipitation : 2-4ug/500ug of lysate Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This LSM14A antibody is available for research use only.



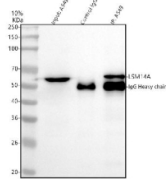
Immunofluorescent staining of LSM14A using anti-LSM14A antibody (green). LSM14A was detected in an immunocytochemical section of HELA cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-LSM14A antibody overnight at 4oC. DyLight 488 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 LSM14A using anti-LSM14A antibody. Lane 1: human HEL whole cell lysates, Lane 2: human whole cell lysates, Lane 3: human SH-SY5Y whole cell lysates, Lane 4: human 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-LSM14A 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 enhanced chemiluminescent. The expected molecular weight of LSM14A is ~51 kDa.



Flow Cytometry analysis of SH-SY5Y cells using anti-LSM14A antibody. Overlay histogram showing SH-SY5Y 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-LSM14A 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.



Immunoprecipitation of LSM14A in whole cell lysate. Western blot analysis of LSM14A using anti-LSM14A antibody. Lane 1: whole cell lysates (30ug) Lane 2: Rabbit control IgG instead of anti-LSM14A antibody in whole cell lysate. Lane 3: anti-LSM14A antibody (2ug) + whole cell lysate (500ug) After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-LSM14A antibody at a dilution of 0.5 ug/ml and probed with a goat anti-rabbit IgG-HRP secondary antibody. The signal is developed using ECL Plus Western Blotting Substrate. The expected molecular weight of LSM14A is ~51 kDa.

Description

LSM14A antibody detects Sm-like protein LSM14A, a cytoplasmic RNA-binding protein that functions in mRNA storage, decay, and translational control. LSM14A is a core component of processing bodies (P-bodies), dynamic cytoplasmic granules involved in mRNA surveillance and post-transcriptional gene regulation. It plays a key role in mRNA decapping and interacts with proteins such as DDX6, EDC3, and PATL1 to form ribonucleoprotein complexes. The LSM14A antibody is essential for studying mRNA metabolism, stress response, and the regulation of gene expression at the post-transcriptional level.

LSM14A is encoded by the LSM14A gene located on human chromosome 19p13.2. The protein is approximately 46 kilodaltons and contains an Sm-like domain that mediates RNA binding and protein-protein interactions. It also includes a C-terminal FDF motif required for association with DDX6 helicase, a central regulator of mRNA decapping and translational repression. LSM14A localizes to discrete cytoplasmic foci corresponding to P-bodies, which dynamically assemble and disassemble in response to stress and cellular signaling. Through its activity, LSM14A influences mRNA stability and translation during differentiation and immune activation.

The LSM14A antibody reveals strong cytoplasmic punctate staining under conditions that promote P-body formation, such as serum starvation or oxidative stress. Western blot analysis typically detects a single band near 51 kilodaltons. Functional studies demonstrate that loss of LSM14A impairs mRNA decay, leading to prolonged expression of transiently expressed transcripts. Moreover, LSM14A participates in innate immune responses by regulating the stability of interferon-related mRNAs, linking RNA metabolism to antiviral defense mechanisms.

Recent research indicates that LSM14A interacts with other RNA granule components, including GW182 and AGO2, bridging mRNA silencing and decay pathways. It also contributes to stress granule dynamics and may influence autophagy signaling through mRNA control. Dysregulation of LSM14A expression has been observed in certain cancers and neurodegenerative diseases, highlighting its importance in cellular stress adaptation. NSJ Bioreagents provides a validated LSM14A antibody optimized for western blot, immunocytochemistry, and confocal microscopy applications. This reagent enables researchers to dissect mRNA storage and degradation pathways as well as stress-responsive post-transcriptional regulation.

Application Notes

Optimal dilution of the LSM14A antibody should be determined by the researcher.

Immunogen

E.coli-derived human LSM14A recombinant protein (Position: F105-R404) was used as the immunogen for the LSM14A antibody.

Storage

After reconstitution, the LSM14A antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.