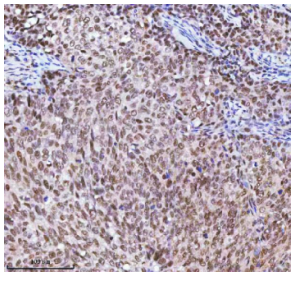
RBM42 Antibody / RNA-binding motif protein 42 (FY12838)

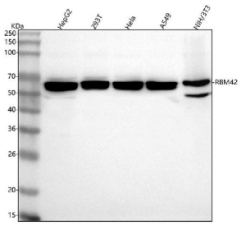
Catalog No.	Formulation	Size
FY12838	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

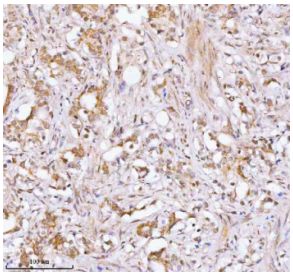
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9BTD8
Localization	Nuclear, cytoplasmic
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml Immunocytochemistry: 5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This RBM42 antibody is available for research use only.



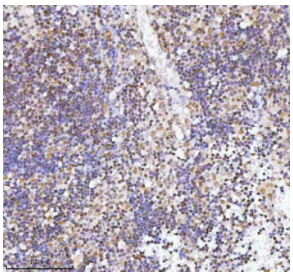
Immunohistochemical staining of RBM42 using anti-RBM42 antibody. RBM42 was detected in a paraffin-embedded section of human cervix squamous cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-RBM42 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.



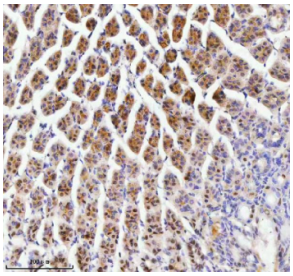
Western blot analysis of RBM42 using anti-RBM42 antibody. Lane 1: human HepG2 whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human Hela whole cell lysates, Lane 4: human whole cell lysates, Lane 5: mouse NIH/3T3 whole cell lysates. After electrophoresis, proteins were transferred 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-RBM42 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. RBM42 western blot across human cell lines shows a predominant band at ~65 kDa with a minor ~50 kDa species; mouse NIH 3T3 shows a stronger ~50 kDa band. The higher apparent mass is consistent with RBM42â€™s anomalous migration and post-translational modification, whereas the ~50 kDa band likely represents the less-modified form (more evident in mouse cells).



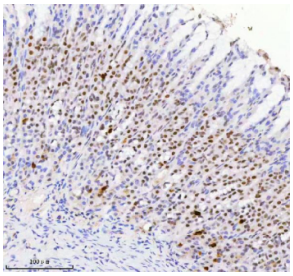
Immunohistochemical staining of RBM42 using anti-RBM42 antibody. RBM42 was detected in a paraffin-embedded section of human prostate adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-RBM42 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.



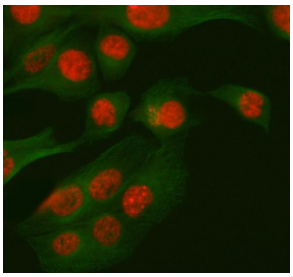
Immunohistochemical staining of RBM42 using anti-RBM42 antibody. RBM42 was detected in a paraffin-embedded section of human spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-RBM42 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.



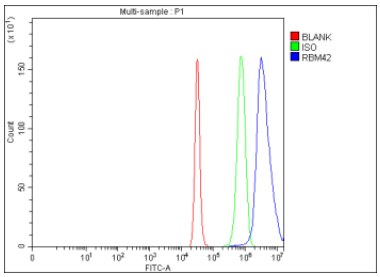
Immunohistochemical staining of RBM42 using anti-RBM42 antibody. RBM42 was detected in a paraffin-embedded section of mouse stomach tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-RBM42 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.



Immunohistochemical staining of RBM42 using anti-RBM42 antibody. RBM42 was detected in a paraffin-embedded section of rat stomach 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-RBM42 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.



Immunofluorescent staining of RBM42 using anti-RBM42 antibody (red) and anti-Beta Tubulin antibody (green). RBM42 was detected in immunocytochemical section of human 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-RBM42 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG and FITC Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of 293T cells using anti-RBM42 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-RBM42 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 (Red line) was also used as a control.

Description

RBM42 antibody detects RNA-binding motif protein 42, a nuclear RNA-binding protein involved in post-transcriptional gene regulation, mRNA stability, and stress response. Encoded by the RBM42 gene on chromosome 12q13.12, this protein belongs to the RNA recognition motif (RRM) family and participates in alternative splicing, RNA transport, and translation control. RBM42 plays an important role in maintaining transcriptome stability during stress and in modulating the fate of specific mRNAs involved in cell growth and survival.

Structurally, RBM42 contains two conserved RRM domains that enable specific binding to U-rich RNA sequences. It interacts with the spliceosome and ribonucleoprotein complexes to regulate pre-mRNA processing. During cellular stress, RBM42 localizes to stress granules and contributes to the sequestration of mRNAs, preventing unwanted translation and preserving RNA integrity until conditions normalize. It also associates with components of the nonsense-mediated decay pathway, suggesting a role in RNA surveillance and turnover.

The RBM42 antibody is widely used in molecular biology, RNA processing, and stress signaling research to study post-transcriptional control mechanisms and RNA-protein complex dynamics. Western blot analysis identifies a 45 kilodalton band corresponding to RBM42, while immunofluorescence reveals strong nuclear staining with perinucleolar enrichment under basal conditions. Upon stress induction, cytoplasmic granule localization becomes prominent, consistent with its role in RNA regulation and cellular adaptation.

RBM42 is implicated in diverse biological processes, including embryonic development, hematopoiesis, and tumor progression. Its expression is upregulated under hypoxia and oxidative stress, contributing to cellular resistance mechanisms. Dysregulation of RBM42 has been associated with aberrant mRNA metabolism in cancers and neurodegenerative diseases, where mis-splicing and altered RNA transport disrupt homeostasis. The RBM42 antibody enables researchers to track these dynamic changes and characterize its role in RNA fate determination.

Functionally, RBM42 acts as a molecular chaperone for specific mRNAs, maintaining their stability and coordinating translation with cellular energy states. It interfaces with the ribosomal machinery and modulates translation initiation through mRNA secondary structure binding. The RBM42 antibody provides a powerful reagent for exploring RNA biology, splicing regulation, and cellular stress adaptation. NSJ Bioreagents validates this antibody for western blotting, immunohistochemistry, and immunofluorescence, ensuring high performance and reproducibility in RNA-related research.

Application Notes

Optimal dilution of the RBM42 antibody should be determined by the researcher.

Immunogen

E.coli-derived human RBM42 recombinant protein (Position: E73-K469) was used as the immunogen for the RBM42 antibody.

Storage

After reconstitution, the RBM42 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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