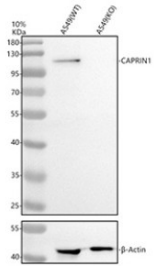
CAPRIN1 Antibody / RNG105 Antibody (FY13687)

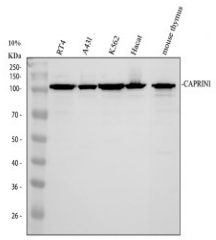
Catalog No.	Formulation	Size
FY13687	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

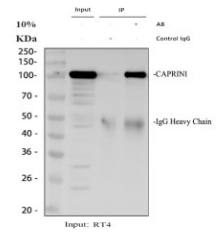
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q14444
Applications	Western blot: 1-2ug/ml Flow cytometry: 1-3ug/million cells Immunohistochemistry (FFPE): 2-5ug/ml Immunoprecipitation: 2ug per 500ug of lysate Direct ELISA: 0.1-0.5ug/ml
Limitations	This CAPRIN1 Antibody / RNG105 Antibody is available for research use only.



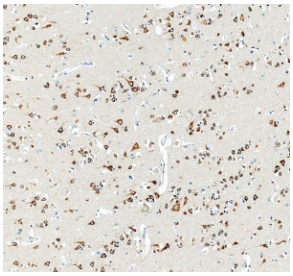
CAPRIN1 Antibody Western Blot Validation in A549 Wild-Type and CAPRIN1 Knockout Cells. Western blot analysis of human A549 wild-type (WT, lane 1) and CAPRIN1 knockout (KO, lane 2) whole-cell lysates using RNG105 Antibody at 0.5 ug/ml. Each lane contains 30 ug of total protein under reducing conditions. An immunoreactive band near 110 kDa is detected in the WT sample and absent in the KO sample, supporting antibody specificity for CAPRIN1. Although its calculated molecular weight is approximately 78 kDa, CAPRIN1 has been detected at approximately 105-120 kDa in independent studies and was historically designated GPIP137 based on an apparent molecular weight near 137 kDa. Beta-Actin serves as the loading control.



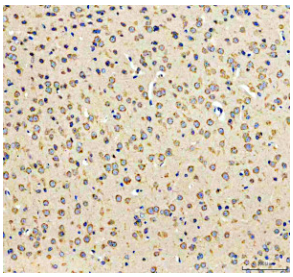
CAPRIN1 Antibody Western Blot Analysis of RT4, A431, K562, HaCaT and Mouse Thymus Lysates. Western blot analysis using RNG105 Antibody at 0.5 ug/ml. Lane 1: human RT4 cells; lane 2: human A431 cells; lane 3: human K562 cells; lane 4: human HaCaT cells; lane 5: mouse thymus. Each lane contains 30 ug of total protein under reducing conditions. Immunoreactive bands are detected at approximately 100 kDa, compared with the calculated CAPRIN1 molecular weight of approximately 78 kDa. CAPRIN1 has been identified in published studies at apparent molecular weights of approximately 105-120 kDa and was historically characterized as GPIP137, reflecting an apparent molecular weight near 137 kDa.



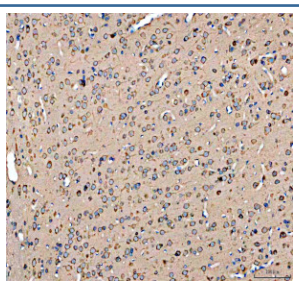
CAPRIN1 Antibody Immunoprecipitation Analysis of Human RT4 Cell Lysate. Immunoprecipitation of CAPRIN1 from human RT4 whole-cell lysate using RNG105 Antibody. Lane 1 contains 30 ug of input lysate; lane 2 represents immunoprecipitation with rabbit control IgG; lane 3 represents immunoprecipitation using 2 ug of anti-CAPRIN1 antibody and 500 ug of RT4 lysate. A prominent band near 100 kDa is detected in the input and antibody immunoprecipitate, while the control IgG lane shows little corresponding signal. The immunoprecipitated protein was detected by Western blot using the same antibody at 0.5 ug/ml.



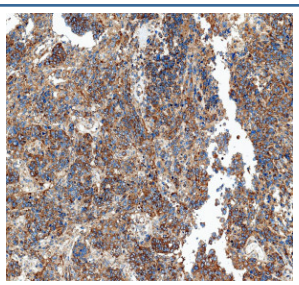
CAPRIN1 Antibody IHC Staining of Human Brain Tissue. Immunohistochemical analysis of FFPE human brain tissue using RNG105 Antibody at 2 ug/ml. Brown DAB staining is prominent in numerous neuronal cell bodies, with predominantly cytoplasmic immunoreactivity and additional staining extending into portions of the cellular processes. Heat-induced epitope retrieval was performed using pH 8 EDTA buffer, followed by overnight primary antibody incubation at 4oC.



CAPRIN1 Antibody IHC Staining of Mouse Brain Tissue. Immunohistochemical analysis of FFPE mouse brain tissue using RNG105 Antibody at 2 ug/ml. Brown DAB staining is visible in numerous cells, with cytoplasmic and perinuclear immunoreactivity against the blue hematoxylin counterstain. Heat-induced epitope retrieval was performed using pH 8 EDTA buffer, followed by overnight primary antibody incubation at 4oC.



CAPRIN1 Antibody IHC Staining of Rat Brain Tissue. Immunohistochemical analysis of FFPE rat brain tissue using RNG105 Antibody at 2 ug/ml. Brown DAB staining is distributed among neuronal cell bodies, with cytoplasmic immunoreactivity and variable staining in the surrounding tissue. Heat-induced epitope retrieval was performed using pH 8 EDTA buffer, followed by overnight primary antibody incubation at 4oC.



CAPRIN1 Antibody IHC Staining of Human Ovarian Cancer Tissue. Immunohistochemical analysis of FFPE human ovarian cancer tissue using RNG105 Antibody at 2 ug/ml. Brown DAB staining is distributed throughout numerous tumor cells, with prominent cytoplasmic and peripheral cellular immunoreactivity against the blue hematoxylin counterstain. Heat-induced epitope retrieval was performed using pH 8 EDTA buffer, followed by overnight primary antibody incubation at 4oC.

Description

CAPRIN1 Antibody / RNG105 Antibody targets cytoplasmic activation/proliferation-associated protein 1 (CAPRIN1), an RNA-binding protein involved in post-transcriptional gene regulation, messenger RNA transport, and the organization of cytoplasmic ribonucleoprotein complexes. Also known as GPIP137, CAPRIN1 participates in the assembly of RNA-containing structures that influence protein synthesis and cellular responses to environmental stress. The protein associates with messenger ribonucleoprotein particles and regulatory factors that control the localization, stability, and translation of selected transcripts. These activities connect CAPRIN1 to cellular proliferation, differentiation, and intracellular RNA organization.

CAPRIN1 contains regions that support RNA binding and interactions with proteins involved in ribonucleoprotein assembly. It associates with G3BP1, a central regulator of stress granule formation, and contributes to the recruitment of untranslated messenger RNAs into cytoplasmic condensates. Stress granules are dynamic, membrane-free structures that form when translation initiation is disrupted, allowing cells to reorganize messenger RNAs and associated proteins during stress. CAPRIN1 participates in these processes through multivalent molecular interactions that influence condensate assembly and the availability of transcripts for translation.

The historical designation RNG105 reflects CAPRIN1's established association with neuronal RNA granules and localized protein synthesis. Research has implicated this protein in the transport and translational regulation of messenger RNAs within dendrites, where spatial control of protein synthesis contributes to synaptic development and plasticity. CAPRIN1 interacts with proteins involved in translational repression and RNA metabolism, helping coordinate local changes in gene expression with neuronal activity. Its contributions to RNA granule organization extend beyond neuronal processes and are relevant to broader mechanisms of intracellular RNA trafficking.

CAPRIN1 has also been investigated in cancer biology because of its involvement in cellular growth, RNA regulation, and stress responses. Altered expression may influence proliferative signaling and the translation of transcripts associated with tumor progression, although its biological effects depend on cellular context. Research using CAPRIN1 Antibody can help characterize the expression and distribution of this RNA-binding protein, particularly its contributions to stress granule dynamics, neuronal RNA transport, and post-transcriptional regulation.

Explore our selection of Cell Biology Antibodies for investigating RNA-binding proteins, stress granule formation, and intracellular mechanisms of translational regulation.

Application Notes

Optimal dilution of the CAPRIN1 Antibody / RNG105 Antibody should be determined by the researcher.

Immunogen

Amino acids KLVDPERDMSLRLNEQ from human Cytoplasmic activation/proliferation-associated protein 1 protein were used as the immunogen for the CAPRIN1 Antibody.

Storage

After reconstitution, the CAPRIN1 Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Cytoplasmic activation proliferation associated protein 1 antibody, Cytoplasmic activation/proliferation-associated protein 1 antibody, GPI-anchored protein interacting protein p137 antibody, GPIP137 antibody, GPIAP1 antibody, RNG105 antibody, M11S1 antibody, CAPRIN-1 antibody, Cell cycle associated protein antibody, CAPRIN1 RNA-binding protein antibody

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