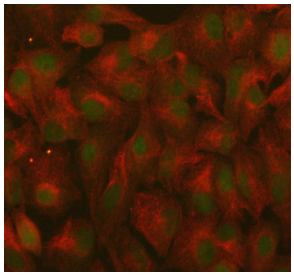
RANBP9 Antibody / Ran-binding protein 9 (FY12137)

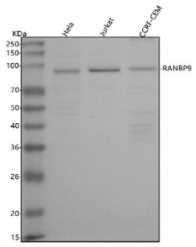
Catalog No.	Formulation	Size
FY12137	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

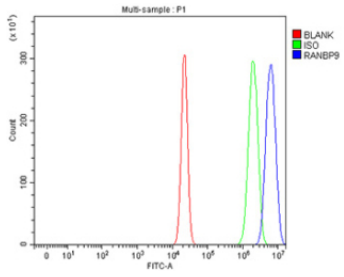
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q96S59
Localization	Nucleus, cytoplasm, cell membrane
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This RANBP9 antibody is available for research use only.



Immunofluorescent staining of RANBP9 using anti-RANBP9 antibody (green) and anti-Beta Tubulin antibody (red). RANBP9 was detected in immunocytochemical section of cell. 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-RANBP9 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and Cy3 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of RANBP9 using anti-RANBP9 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human CCRF-CEM 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-RANBP9 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 band size for RANBP9 is at 78 kDa but is commonly observed at 90-95 kDa due to phosphorylation and acidic sequence composition.



Flow Cytometry analysis of U20S cells using anti-RANBP9 antibody. Overlay histogram showing U20S 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-RANBP9 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

RANBP9 antibody detects Ran-binding protein 9, encoded by the RANBP9 gene on chromosome 6p23. RANBP9 antibody is used to study this multifunctional scaffold protein, which interacts with a wide range of partners and integrates signaling pathways across the nucleus, cytoplasm, and cell surface. RANBP9 belongs to a family of Ran-binding proteins that regulate nucleocytoplasmic transport and signaling. However, RANBP9 is distinguished by its adaptor role, coordinating interactions in growth factor signaling, cytoskeletal dynamics, and transcriptional regulation.

Structurally, RANBP9 contains several conserved domains, including a SPRY domain, LisH motif, CTLH domain, and a Ran-binding domain. These elements allow interactions with diverse proteins such as receptor tyrosine kinases, scaffolding proteins, and chromatin regulators. The presence of a LisH domain implicates RANBP9 in microtubule regulation and dimerization. The CTLH domain links RANBP9 to ubiquitin ligase complexes, suggesting a role in protein turnover. Its domain organization defines it as a versatile scaffold capable of assembling multiprotein complexes.

Functionally, RANBP9 contributes to diverse cellular processes. It enhances signaling by interacting with receptors such as c-Met and integrins, thereby influencing cell adhesion, migration, and proliferation. In the nucleus, RANBP9 regulates transcription through associations with chromatin-modifying complexes. Its adaptor role in cytoskeletal organization enables actin remodeling, critical for cell shape and motility. Loss-of-function studies demonstrate that depletion of RANBP9 impairs cell adhesion, migration, and stress responses. Researchers employ RANBP9 antibody to dissect these pathways in both normal physiology and disease states.

Clinically, altered RANBP9 expression is implicated in cancer, neurodegeneration, and viral infection. Overexpression of RANBP9 has been observed in lung, breast, and gastric cancers, where it promotes tumor progression by amplifying receptor signaling. Conversely, loss of RANBP9 can impair tumor suppression by destabilizing growth factor receptors. In neurobiology, RANBP9 overexpression contributes to amyloid precursor protein processing and amyloid-beta accumulation, linking it to Alzheimer's disease. In infectious disease, RANBP9 interacts with viral proteins, influencing replication and immune evasion. These diverse associations underscore its role as a molecular hub.

Experimentally, RANBP9 antibody is applied in western blotting to detect the ~90 kDa protein, in immunohistochemistry to analyze tumor expression patterns, and in immunofluorescence to study cytoskeletal localization. Immunoprecipitation with RANBP9 antibody reveals interactions with receptor complexes, chromatin regulators, and ubiquitin ligase components. NSJ Bioreagents supplies RANBP9 antibody as a reliable reagent for cancer biology, neurodegeneration studies, and signaling research.

Application Notes

Optimal dilution of the RANBP9 antibody should be determined by the researcher.

Immunogen

E.coli-derived human RANBP9 recombinant protein (Position: K348-E574) was used as the immunogen for the RANBP9 antibody.

Storage

After reconstitution, the RANBP9 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.