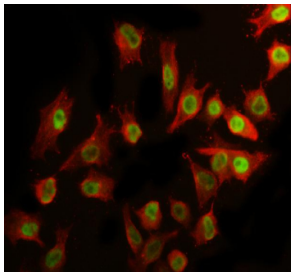
RTF2 Antibody / Replication termination factor 2 (FY12426)

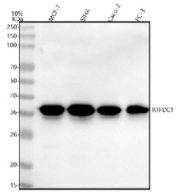
Catalog No.	Formulation	Size
FY12426	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

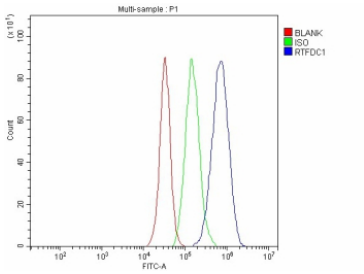
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9BY42
Applications	ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells Immunoprecipitation : 2-4ug/500ug of lysate Immunofluorescence : 5ug/ml Immunocytochemistry : 5ug/ml Western Blot : 0.25-0.5ug/ml
Limitations	This RTF2 antibody is available for research use only.



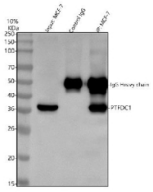
Immunofluorescent staining of RTF2 using anti-RTF2 antibody (green) and anti-Beta Tubulin antibody (red). RTF2 was detected in immunocytochemical section of cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-RTF2 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and DyLight 594 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.



Western blot analysis of RTF2 using anti-RTF2 antibody. Lane 1: human MCF-7 whole cell lysates, Lane 2: human Siha whole cell lysates, Lane 3: human Caco-2 whole cell lysates, Lane 4: human PC-3 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-RTF2 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. RTF2 (~34 kDa predicted) was detected primarily at ~37 kDa with a weaker ~35 kDa band, consistent with phosphorylation-dependent mobility shifts and minor processing events described in replication stress studies.



Flow Cytometry analysis of U87 cells using anti-RTF2 antibody. Overlay histogram showing U87 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-RTF2 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 RTF2 in MCF-7 whole cell lysate. Western blot analysis of RTF2 using anti-RTF2 antibody; Lane 1: MCF-7 whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-RTF2 antibody in MCF-7 whole cell lysate; Lane 3: anti-RTF2 antibody (2ug) + MCF-7 whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-RTF2 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. RTF2 (~34 kDa predicted) was detected primarily at ~37 kDa with a weaker ~35 kDa band, consistent with phosphorylation-dependent mobility shifts and minor processing events described in replication stress studies.

Description

The RTF2 antibody targets Replication termination factor 2, a nuclear protein encoded by the RTF2 gene that functions in DNA replication and replication-fork stability. Replication termination factor 2 is a component of the replication-stress response pathway that safeguards genome integrity by promoting proper fork processing and restart. The RTF2 antibody provides an essential tool for studying DNA replication, repair mechanisms, and cell-cycle regulation.

Replication termination factor 2 associates with replication forks and interacts with the replisome to stabilize stalled replication structures. It is recruited to chromatin during S phase and removed after replication completion. The RTF2 antibody supports visualization of these dynamics, allowing researchers to monitor fork progression and resolution under genotoxic stress. RTF2 is critical for preventing aberrant fork degradation and double-strand break formation, thereby maintaining genomic stability.

Loss of RTF2 leads to replication defects, increased DNA damage signaling, and activation of checkpoint kinases such as ATR and CHK1. The RTF2 antibody enables detection of expression changes in response to DNA damage or replication inhibitors, aiding studies into checkpoint control and genome maintenance. Its depletion causes hypersensitivity to replication-blocking agents and reduced cell viability, emphasizing its protective role during S phase.

Replication termination factor 2 also participates in fork restart after hydroxyurea-induced stalling, coordinating reloading

of replication machinery components. The RTF2 antibody allows mechanistic studies of this recovery process, revealing how RTF2 collaborates with helicases and nucleases to reestablish replication competence. Dysregulation of RTF2 expression has been implicated in cancer development and progression due to impaired replication fidelity.

The RTF2 antibody performs effectively in western blotting, immunofluorescence, and immunohistochemistry, showing characteristic nuclear staining consistent with its role in DNA metabolism. NSJ Bioreagents provides this antibody with validated specificity and reproducibility for use in molecular-genetics, oncology, and replication research. By supporting detailed analysis of Replication termination factor 2, the RTF2 antibody advances understanding of DNA replication dynamics, fork stability, and genome-maintenance pathways.

Application Notes

Optimal dilution of the RTF2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human RTF2 recombinant protein (Position: D4-F306) was used as the immunogen for the RTF2 antibody.

Storage

After reconstitution, the RTF2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.