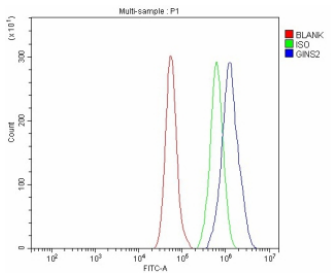
GINS2 Antibody / GINS protein subunit 2 / PSF2 (FY13207)

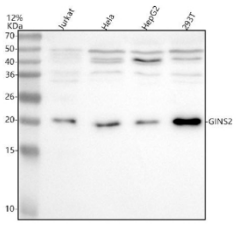
Catalog No.	Formulation	Size
FY13207	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

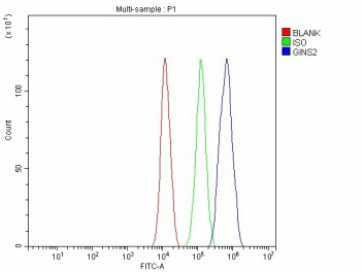
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9Y248
Applications	Western Blot: 0.25-0.5ug/ml Immunoprecipitation: 2-4ug/500ug of lysate Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This GINS2 antibody is available for research use only.



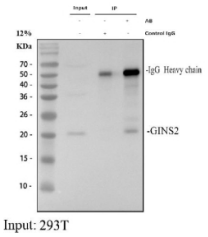
Flow Cytometry analysis of cells using anti-GINS2 antibody. Overlay histogram showing cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-GINS2 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.



Western blot analysis of PSF2/GINS2 using anti-GINS2 antibody. Lane 1: human Jurkat whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human HepG2 whole cell lysates, Lane 4: human 293T 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-GINS2 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 PSF2/GINS2 is at 21 kDa.



Flow Cytometry analysis of JK cells using anti-GINS2 antibody. Overlay histogram showing JK 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-GINS2 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.



Immunoprecipitating (IP) PSF2/GINS2 in 293T whole cell lysate followed by western blot analysis of PSF2/GINS2 using anti-GINS2 antibody; Lane 1: 293T whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-GINS2 antibody in 293T whole cell lysate; Lane 3: anti-GINS2 antibody (2ug) + 293T whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-GINS2 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 PSF2/GINS2 is at 21 kDa.

Description

GINS2 antibody detects DNA replication complex GINS protein subunit 2, also known as PSF2, a component of the GINS complex that is essential for the initiation and elongation of DNA replication. The UniProt recommended name is DNA replication complex GINS protein subunit 2 (GINS2). This protein functions as part of a heterotetrameric complex composed of GINS1 (Sld5), GINS2 (Psf2), GINS3 (Psf3), and GINS4 (Sld15), which together interact with the MCM helicase and CDC45 to form the active CMG (Cdc45-MCM-GINS) helicase complex.

Functionally, GINS2 antibody identifies a 204-amino-acid nuclear protein required for the progression of DNA replication forks. GINS2 promotes helicase activation, stabilizes replication machinery, and facilitates the unwinding of DNA strands during S-phase. By interacting with key replication factors including MCM2-7, CDC45, and DNA polymerase alpha, GINS2 ensures accurate and efficient genome duplication. It also contributes to replication checkpoint control, preventing DNA damage accumulation and maintaining genomic stability.

The GINS2 gene is located on chromosome 16q24.1 and is expressed in proliferating tissues such as bone marrow, thymus, and tumors. Expression is cell cycle-regulated, peaking during S-phase when DNA replication is most active. GINS2 is evolutionarily conserved, highlighting its fundamental role in DNA synthesis and cell division.

Pathologically, GINS2 overexpression has been linked to tumorigenesis and poor prognosis in cancers including breast, lung, and gastric carcinoma. Excessive GINS2 activity enhances cell proliferation, while its depletion leads to replication stress, checkpoint activation, and apoptosis. Research using GINS2 antibody supports studies in DNA replication, cell cycle regulation, and cancer biology.

GINS2 antibody is validated for western blotting, immunofluorescence, and immunohistochemistry to detect replication complex components. NSJ Bioreagents provides GINS2 antibody reagents optimized for studies in DNA synthesis, genome stability, and cell proliferation pathways.

Structurally, DNA replication complex GINS protein subunit 2 adopts a beta-strand-rich conformation that contributes to the ring-shaped architecture of the GINS complex. This structural organization provides stability and interaction surfaces for other replication proteins. This antibody facilitates detailed investigation of GINS2's mechanistic role in replication fork progression and cancer-related replication stress.

Application Notes

Optimal dilution of the GINS2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PSF2/GINS2 recombinant protein (Position: M1-F185) was used as the immunogen for the GINS2 antibody.

Storage

After reconstitution, the GINS2 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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