# 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**

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|---|---|
| **Availability** | 1-2 days |
| **Species Reactivity** | Human |
| **Format** | Lyophilized |
| **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<br>Immunoprecipitation : 2-4ug/500ug of lysate<br>Flow Cytometry : 1-3ug/million cells<br>ELISA : 0.1-0.5ug/ml |
| **Limitations** | This GINS2 antibody is available for research use only. |

## 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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