# GBF1 Antibody / Golgi-specific brefeldin A-resistance factor 1 (FY13072)

| Catalog No. | Formulation | Size |
|---|---|---|
| FY13072 | 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, Mouse, Rat |
| **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** | Q92538 |
| **Applications** | Western Blot : 0.25-0.5ug/ml<br>Immunohistochemistry : 2-5ug/ml<br>Immunocytochemistry : 5ug/ml<br>Immunofluorescence : 5ug/ml<br>Flow Cytometry : 1-3ug/million cells<br>ELISA : 0.1-0.5ug/ml |
| **Limitations** | This GBF1 antibody is available for research use only. |

## Description

GBF1 antibody detects Golgi-specific brefeldin A-resistance factor 1, a guanine nucleotide exchange factor that activates ADP-ribosylation factor (ARF) GTPases controlling membrane trafficking. The UniProt recommended name is Golgi-specific brefeldin A-resistance factor 1 (GBF1). This large cytosolic protein is essential for vesicle formation, Golgi integrity, and maintenance of the secretory pathway.

Functionally, GBF1 antibody identifies a 1859-amino-acid protein that catalyzes GDP-GTP exchange on ARF1, ARF3, and related GTPases, stimulating COPI-coated vesicle assembly and Golgi-to-ER transport. GBF1 localizes to the cis-Golgi and early endosomes, where it regulates membrane curvature and vesicle budding. Brefeldin A inhibits many GEFs but not GBF1, making it a critical regulator of Golgi architecture during stress or drug treatment.

The GBF1 gene is located on chromosome 10q24.32 and is ubiquitously expressed in mammalian cells, with high abundance in secretory tissues. GBF1 coordinates with its effectors, such as BIG1 and BIG2, to sustain bidirectional

membrane traffic between the endoplasmic reticulum and Golgi complex. Its activity is modulated by lipid composition, phosphorylation, and interaction with small GTPases and coatomer complexes.

Pathologically, GBF1 dysfunction disrupts vesicular trafficking and contributes to Golgi fragmentation, neurodegeneration, and viral replication. Several RNA viruses exploit GBF1 to remodel host membranes for replication complexes. Conversely, depletion of GBF1 can impair secretion and protein glycosylation, leading to ER stress and altered cellular homeostasis.

GBF1 antibody is widely used in cell biology and virology research to study Golgi dynamics, ARF signaling, and vesicle trafficking. It is suitable for western blotting, immunofluorescence, and immunoprecipitation. NSJ Bioreagents offers GBF1 antibody reagents validated for Golgi transport and membrane trafficking research.

Structurally, GBF1 contains a Sec7 catalytic domain responsible for nucleotide exchange, flanked by dimerization and regulatory domains that ensure specificity for ARF family substrates. Its structural organization supports dynamic localization to Golgi membranes and adaptation to cellular conditions. This antibody enables detailed study of Golgi organization, secretory pathway regulation, and virus-host interactions.

## Application Notes

Optimal dilution of the GBF1 antibody should be determined by the researcher.

## Immunogen

E.coli-derived human GBF1 recombinant protein (Position: E110-K1600) was used as the immunogen for the GBF1 antibody.

## Storage

After reconstitution, the GBF1 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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