GGA2 Antibody / Golgi-localized, gamma ear-containing, ARF-binding protein 2 (FY12927)

Catalog No.	Formulation	Size
FY12927	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
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	Q9UJY4
Applications	ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells Immunoprecipitation : 2-4ug/500ug of lysate Western Blot : 0.25-0.5ug/ml
Limitations	This GGA2 antibody is available for research use only.

Description

GGA2 antibody detects Golgi-associated, gamma-adaptin ear-containing, ARF-binding protein 2, a clathrin adaptor involved in vesicular trafficking between the trans-Golgi network (TGN) and endosomes. Encoded by the GGA2 gene on chromosome 16p12.3, this cytosolic adaptor belongs to the Golgi-localized, gamma-ear-containing, ARF-binding (GGA) protein family that mediates cargo selection and vesicle formation. GGA2 plays a critical role in sorting of lysosomal enzymes and membrane receptors by linking cargo proteins to clathrin-coated vesicles.

Structurally, GGA2 is a 613-amino-acid cytoplasmic protein of approximately 70 kilodaltons composed of three major domains: a VHS (Vps27, Hrs, STAM) domain that recognizes sorting signals on cargo proteins, a GAT (GGA and TOM1) domain that binds ARF1-GTP, and a GAE (gamma-adaptin ear) domain that recruits accessory proteins involved in vesicle formation. These domains coordinate to promote cargo capture, clathrin coat assembly, and vesicle budding from the TGN.

The GGA2 antibody is widely used in cell biology, membrane trafficking, and protein transport research to study

endosomal sorting, Golgi organization, and receptor recycling. Western blot analysis detects a 70 kilodalton band corresponding to GGA2, while immunofluorescence reveals punctate perinuclear staining consistent with Golgi localization. This antibody serves as a valuable tool for examining vesicle-mediated transport and adaptor protein function in secretory pathways.

Functionally, GGA2 interacts with mannose-6-phosphate receptors and lysosomal hydrolase precursors, mediating their trafficking to late endosomes and lysosomes. It also contributes to receptor downregulation and recycling through ARF-dependent membrane dynamics. Loss or disruption of GGA2 impairs lysosomal enzyme delivery and can cause abnormal accumulation of cargo proteins within the Golgi apparatus. The GGA2 antibody enables detailed study of Golgi-to-endosome transport, cargo recognition mechanisms, and clathrin coat assembly. NSJ Bioreagents validates this antibody for western blotting, immunohistochemistry, and immunofluorescence, ensuring precise detection for intracellular trafficking research.

Application Notes

Optimal dilution of the GGA2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human GGA2 recombinant protein (Position: L26-A608) was used as the immunogen for the GGA2 antibody.

Storage

After reconstitution, the GGA2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.