10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GGA1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2316a

Product Information

Application	WB, IF, E
Primary Accession	Q9UJY5
Other Accession	Q8R0H9
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	70384
Antigen Region	1-30

Additional Information

Gene ID	26088
Other Names	ADP-ribosylation factor-binding protein GGA1, Gamma-adaptin-related protein 1, Golgi-localized, gamma ear-containing, ARF-binding protein 1, GGA1
Target/Specificity	This GGA1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human GGA1.
Dilution	WB~~1:1000 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GGA1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GGA1
Function	Plays a role in protein sorting and trafficking between the trans-Golgi network (TGN) and endosomes. Mediates the ARF-dependent recruitment of clathrin to the TGN and binds ubiquitinated proteins and membrane cargo molecules with a cytosolic acidic cluster-dileucine (DXXLL) motif

(PubMed:11301005, PubMed:15886016). Mediates export of the GPCR receptor ADRA2B to the cell surface (PubMed:27901063). Required for targeting PKD1:PKD2 complex from the trans-Golgi network to the cilium membrane (By similarity). Regulates retrograde transport of proteins such as phosphorylated form of BACE1 from endosomes to the trans-Golgi network (PubMed:15615712, PubMed:15886016).

Cellular Location Golgi apparatus, trans-Golgi network membrane; Peripheral membrane protein. Endosome membrane; Peripheral membrane protein Early endosome membrane; Peripheral membrane protein

Tissue Location Ubiquitously expressed.

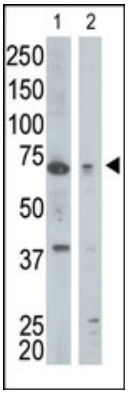
Background

GGA1 is a member of the Golgi-localized, gamma adaptin ear-containing, ARF-binding (GGA) protein family. Members of this family are ubiquitous coat proteins that regulate the trafficking of proteins between the trans-Golgi network and the lysosome. These proteins share an amino-terminal VHS domain which mediates sorting of the mannose 6-phosphate receptors at the trans-Golgi network. They also contain a carboxy-terminal region with homology to the ear domain of gamma-adaptins.

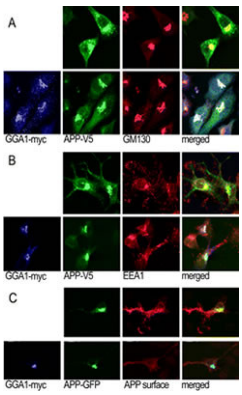
References

Zhai, P., et al., Biochemistry 42(47):13901-13908 (2003).
Zhu, G., et al., Biochemistry 42(21):6392-6399 (2003).
Shiba, T., et al., Nat. Struct. Biol. 10(5):386-393 (2003).
Suer, S., et al., Proc. Natl. Acad. Sci. U.S.A. 100(8):4451-4456 (2003).
Shiba, T., et al., Nature 415(6874):937-941 (2002).

Images



The anti-GGA1 Pab (Cat. #AP2316a) is used in Western blot to detect GGA1 in mouse kidney tissue lysate (lane 1) and Jurkat cell lysate (lane 2).



A, N2a cells cotransfected with APP770 −V5 and GGA1 −myc or empty vector were immunostained for APP (Alexa488; green), GGA1 (Cy5; blue), and the Golgi marker GM130 (Cy3; red). B, The same transfection was stained for the endosomal marker EEA1 (Cy3). C, To assess cell-surface localization, APP695 −GFP and GGA1 −myc or empty vector were cotransfected and then immunostained with an Ab to the APP ectodomain on ice without permeabilization (Cy3). Cells were then fixed, permeabilized, and stained for GGA1 (Cy5). (J. Neurosci. 2006 Sep 27;26(39):9913-9922)

Citations

- GGA1 acts as a spatial switch altering amyloid precursor protein trafficking and processing.