

Rabbit Anti-GGA1/AP Conjugated antibody

SL13343R-AP

Product Name	Anti-GGA1/AP
Chinese Name	碱性磷酸酶（AP）标记的 γ -衔接蛋白相关蛋白 1 抗体 4930406E12Rik; ADP ribosylation factor binding protein 1; ADP ribosylation factor binding protein GGA1; ADP-ribosylation factor-binding protein GGA1; ARF binding protein 1; ARF-binding protein 1; Gamma adaptin related protein 1; gamma ear-containing; Gamma-adaptin-related protein 1;
Alias	GGA 1; GGA1; GGA1 protein; GGA1_HUMAN; Golgi associated gamma adaptin ear containing ARF; Golgi associated gamma adaptin ear containing ARF binding protein 1; Golgi localized gamma ear containing ARF binding protein 1; Golgi-localized; OTTHUMP00000028975; OTTHUMP00000042200.
Research Area	Cell biology Signal transduction Transporter
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	(predicted:Human,Mouse,Rat,Dog,Pig,Cow,Sheep) IHC-P=1:100-500,IHC-F=1:100-500,ELISA=1:500-5000
Applications	not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	70kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human GGA1
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol. Store at -20 癆 for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20 癆. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 癆.
Storage	

background:

The GGA family of proteins (Golgi-localized, ARF-binding proteins) are ubiquitous coat proteins that facilitate the trafficking of soluble proteins from the trans-Golgi network (TGN) to endosomes/lysosomes by means of interactions with TGN-sorting receptors, ARF (ADP-ribosylation factor), and clathrin (1?). Members of the GGA family, GGA1, GGA2 (also known as VEAR) and GGA3, are multidomain proteins that bind mannose 6-phosphate receptors (MPRs) (1,2,4). GGAs have modular structures with an N-terminal VHS (VPS-27, Hrs, and STAM) domain followed by a GAT (GGA and TOM1) domain, a connecting hinge segment, and a C-terminal GAE (?adaptin ear) domain (5). The amino-terminal VHS domains of GGAs form complexes with the cytoplasmic domains of sorting receptors by recognizing acidic-cluster di-leucine (ACLL) sequences (3). GGA1 and GGA2 do not associate with each other, but they do colocalize on perinuclear membranes (2). The cytosolic domain of memapsin 2, but not that of memapsin 1, binds the VHS domains of GGA1 and GGA2 (6). The human GGA1 gene maps to chromosome 22 and encodes a protein that shares 45% sequence identity with GGA2 and GGA3 (1).

Product Detail

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 (AC-LL) motif.

Subunit:

Monomer. Interacts with NECAP1. Interacts with CNST (By similarity). Interacts with GGA2 and GGA3. Binds to clathrin and activated ARFs. Interacts with RABEP1 and RABGEF1. Interacts with the type-I membrane proteins SORT1, SORL1, LRP3, M6PR/CD-MPR, IGF2R/CI-MPR and BACE1. Binds CCDC91, P200, SYNRG, EPN4, NECAP2 and AFTPH/aftiphilin. Interacts with TSG101 and UBC. Interacts with RNF11.

Subcellular Location:

Golgi apparatus; trans-Golgi network membrane. Endosome membrane.

Tissue Specificity:

Ubiquitously expressed.

Post-translational modifications:

Phosphorylated by CK2 and dephosphorylated by PP2A. Phosphorylation of GGA1 allows the internal AC-LL motif to bind the VHS domain and to inhibit the recognition of cargo signals. Phosphorylated upon DNA damage, probably by ATM or ATR.

Ubiquitinated.

Similarity:

Belongs to the GGA protein family.

Contains 1 GAE domain.

Contains 1 GAT domain.

Contains 1 VHS domain.

Database links:

[Entrez Gene: 26088](#) Human

[Entrez Gene: 106039](#) Mouse

[Entrez Gene: 300066](#) Rat

[Omim: 606004](#) Human

[SwissProt: Q9UJY5](#) Human

[SwissProt: Q8R0H9](#) Mouse

[Unigene: 499158](#) Human

[Unigene: 251331](#) Mouse

[Unigene: 75906](#) Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.