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GGA2 Rabbit pAb

Catalog # AP97419

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9UJY4
Other Accession	Q9UJY4
Reactivity	Rat
Predicted	Pig, Human, Mouse, Rabbit, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	67150
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GGA2
Epitope Specificity	161-260/613
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the GGA protein family. Contains 1 GAE domain. Contains 1 GAT domain. Contains 1 VHS domain.
SUBUNIT	Monomer. Interacts with NECAP1, TSG101, UBC and AFTPH/aftiphilin. Interacts with CNST (By similarity). Interacts with GGA1 and GGA3. Binds to clathrin and activated ARFs. Binds RABEP1 and RABGEF1. Interacts with the type-I membrane proteins SORT1, SORL1, LRP3, M6PR/CD-MPR, IGF2R/CI-MPR and BACE1. Binds the accessory proteins CCDC91, P200, SYNRG, EPN4 and NECAP2.
Post-translational modifications	Ubiquitinated.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	A family of proteins, the GGAs (Golgi-localized, g-adaptin ear-containing, ARF-binding proteins) sequences that showed significant homology to the carboxy-terminal 'ear' domain of g-adaptin. Members of the GGA family (GGA1,GGA2 (also known as VEAR or VHS domain and ear domain of g-adaptin) and GGA3) are ubiquitous coat proteins that facilitate the trafficking of proteins between the trans-Golgi network and the lysosome. However, unlike g-adaptin, the GGAs are not associated with clathrin-coated vesicles or with any of the components of the AP-1 complex. GGA1 and GGA2 are also not associated with each other, although they colocalize on perinuclear membranes. GGA2 shares 45% amino acid sequence identity with GGA1 and 35% with GGA3. In addition to being involved in heterotypic vesicle/suborganelle interactions associated with the Golgi complex, GGA2 may have a tissue-specific function and is highly expressed in kidney, muscle and heart. Furthermore, the VHS domain of GGA2 binds to the acidic cluster-di-leucine motif in the cytoplasmic tail of the cation-independent mannose 6-phosphate receptor (CI-MPR) and this is important for lysosomal enzyme targeting.

Additional Information

Gene ID	23062
Other Names	VEAR; 1200007E24Rik; mKIAA1080; GGA2_HUMAN; GGA2; Gamma-adaptin-related protein 2; Golgi-localized, gamma ear-containing, ARF-binding protein 2; VHS domain and ear domain of gamma-adaptin (Vear); KIAA1080; GGA2_MOUSE; golgi associated, gamma adaptin ear containing, ARF binding protein 2; golgi-associated, gamma adaptin ear containing, ARF binding protein 2
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	GGA2
Synonyms	KIAA1080
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:10747088). Mediates export of the GPCR receptor ADRA2B to the cell surface (PubMed:27901063). Regulates retrograde transport of phosphorylated form of BACE1 from endosomes to the trans- Golgi network (PubMed:15615712).
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.

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