

**Certificate of Analysis**

**Product:** Affinity Purified Anti-Human GGA-1 [Rabbit]

**Code:** 600-401-853

**Lot #:** 16242

**Size:** 100 µg

**Physical State:** Liquid (sterile filtered)

**Antibody Concentration:** 1.35 mg/ml (by UV absorbance at 280 nm)

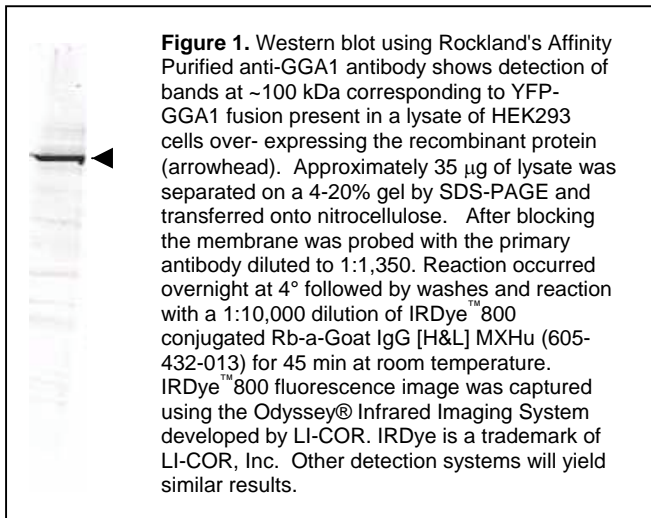
**Buffer:** 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

**Stabilizer:** None

**Preservative:** 0.01% (w/v) Sodium Azide

**Storage Conditions:** Store vial at -20° C prior to opening. Dilute only prior to immediate use. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Expiration date is one (1) year from date of opening.

**Background:** GGA1 (also known as ADP-ribosylation factor binding protein, Golgi-localized, gamma ear-containing, ARF-binding protein 1, Gamma-adaptin related protein 1) plays a role in protein sorting and trafficking between the trans-Golgi network (TGN) and endosomes. This protein 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. GGA1 is a monomeric protein that interacts with NECAP1, GGA2 and GGA3 as well as RABEP1, RABGEF1 and type-I membrane proteins SORT1, SORL1, LRP3, M6PR/CD-MPR, IGF2R/CI-MPR and BACE1. GGA1 is a ubiquitously membrane-associated protein that is localized to TGN and endosomes. Multiple alternatively spliced transcript variants encoding different isoforms have been found for this gene.



**Application Note(s):** This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect bands at 70 kDa in size corresponding to GGA1 by western blotting in the appropriate cell lysate or extract.

<b>Recommended Dilutions:</b>	<b>ELISA</b>	1:10,000 - 1:50,000
	<b>WESTERN BLOT</b>	1:500 - 1:3,000
	<b>IF MICROSCOPY</b>	User Optimized
	<b>OTHER APPLICATIONS</b>	User Optimized

**Purity and Specificity:** This affinity purified antibody is directed against human GGA1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest reactivity with this protein from human based on 100% homology for the immunogen sequence. Cross reactivity may occur with GGA1 from bovine (87% homology), mouse (82% homology) and rat (76% homology) sources. The immunizing sequence is present only in isoform 1 of this protein, therefore cross reactivity with splice variants is not expected. Cross reactivity with GGA1 homologues from other sources has not been determined.

Relevant Link(s):

Swis-Prot [Q9UJY5](#)

NCBI Link [NP\\_037497](#)

**Protein Sequence:** Human GGA1, 639 aa, predicted MW 70.4 kDa

1	mepamepetl	earinratnp	Inkeldwasi	ngfceqlned	fegpplatrI	lahkiqspqe
61	weaiqaltvl	etcmkscgkr	fhdevgkfrf	Inelikvvsp	kylgsrtsek	vknkilelly
121	swtvglpbev	kiaeaayqmlk	kqgivksdpk	lpddttfplp	pprpknvife	deekskmlar
181	llksshpedl	raanklikem	vqedqkrmek	iskrvnaiee	vnnnkvllte	mvmsshsqgga
241	aagssedlmk	elyqrcermr	ptifrlasdt	edndealaei	lqandnltqv	inlykqlvrg
301	eevngdatag	sipgstsall	dlsfldppa	gttypamptr	<b>pgeqaspeqp</b>	<b>sasvsldde</b>
361	lmslglsdpt	ppsgpsldgt	gwnsfqssda	teppapalaq	apsmesrppa	qtslpassgl
421	ddldllgktl	lqqslppesq	qvrwekqqpt	prtlrdlqn	kssscspss	satsllhtvs
481	pepprppqqp	vptelslasi	tvplesikps	niipvtvydq	hgfrilfhfa	rdplpgrsdv
541	lvvvsmlst	appqirnivf	qsavpkvmkv	klqppsgtel	pafnpivhps	aitqvllan
601	pqkekvrlry	klftmgdqt	ynemgdvdqf	pppetwgsI		

**Immunogen:** This affinity-purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 336-352 of Human GGA-1.

#### General References:

Mattera,R., Puertollano,R., Smith,W.J. and Bonifacino,J.S. (2004) The trihelical bundle subdomain of the GGA proteins interacts with multiple partners through overlapping but distinct sites. *J. Biol. Chem.* **279** (30), 31409-31418.

Bai,H., Doray,B. and Kornfeld,S. (2004) GGA1 interacts with the adaptor protein AP-1 through a WNSF sequence in its hinge region. *J. Biol. Chem.* **279** (17), 17411-17417.

Zhai,P., He,X., Liu,J., Wakeham,N., Zhu,G., Li,G., Tang,J. and Zhang,X.C. (2003) The interaction of the human GGA1 GAT domain with rabaptin-5 is mediated by residues on its three-helix bundle. *Biochemistry* **42** (47), 13901-13908.

#### Related Products:

#600-401-853	Affinity Purified Anti-Human GGA-1 [Rabbit]
#600-401-849	Affinity Purified Anti-Human GGA-2 [Rabbit]
#600-401-893	Affinity Purified Anti-Human GGA-3 [Rabbit]
#611-703-127	Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (DONKEY) MX10
#611-132-122	IRDye800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10
#MB-070	Blocking Buffer for Fluorescent Western Blotting
#KIA-003	<b>MaxTag</b> <sup>TM</sup> Anti-RABBIT IgG Kit for Immunoblotting

**USDA Certification:** All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation.

**Note:** This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information.