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GNA11 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21291c

Product Information

Application	WB, IF, E
Primary Accession	P29992
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB52469
Calculated MW	42123

Additional Information

Gene ID	2767
Other Names	Guanine nucleotide-binding protein subunit alpha-11, G alpha-11, G-protein subunit alpha-11, Guanine nucleotide-binding protein G(y) subunit alpha, GNA11, GA11
Target/Specificity	This GNA11 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 115-146 amino acids from the Central region of human GNA11.
Dilution	WB~~1:1000 IF~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	GNA11 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GNA11
Synonyms	GA11
Function	Guanine nucleotide-binding proteins (G proteins) function as transducers

	downstream of G protein-coupled receptors (GPCRs) in numerous signaling cascades (PubMed:31073061). The alpha chain contains the guanine nucleotide binding site and alternates between an active, GTP-bound state and an inactive, GDP-bound state (PubMed:31073061). Signaling by an activated GPCR promotes GDP release and GTP binding (PubMed:31073061). The alpha subunit has a low GTPase activity that converts bound GTP to GDP, thereby terminating the signal (PubMed:31073061). Both GDP release and GTP hydrolysis are modulated by numerous regulatory proteins (PubMed:31073061). Signaling is mediated via phospholipase C-beta-dependent inositol lipid hydrolysis for signal propagation: activates phospholipase C-beta: following GPCR activation, GNA11 activates PLC-beta (PLCB1, PLCB2, PLCB3 or PLCB4), leading to production of diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3) (PubMed:31073061). Transduces FFAR4 signaling in response to long-chain fatty acids (LCFAs) (PubMed:27852822). Together with GNAQ, required for heart development (By similarity). In the respiratory epithelium, transmits OXGR1-dependent signals that lead to downstream intracellular Ca(2+) release and mucocilliary clearance of airborne pathogens.
Cellular Location	Cell membrane; Lipid-anchor. Cytoplasm. Note=In testicular cells, expressed exclusively in the cytoplasm.
Tissue Location	Expressed in testis..

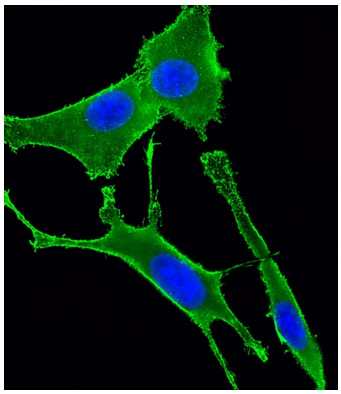
Background

Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems. Acts as an activator of phospholipase C.

References

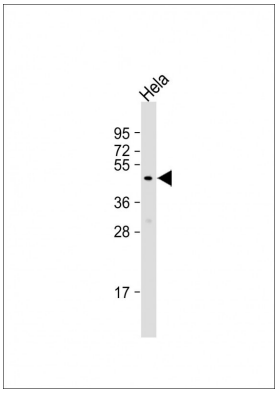
Jiang M.,et al.Proc. Natl. Acad. Sci. U.S.A. 88:3907-3911(1991).
Bai X.H.,et al.Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.
Puhl H.L. III,et al.Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
Grimwood J.,et al.Nature 428:529-535(2004).

Images



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (mouse embryonic fibroblast cell line) cells labeling GNA11 with AP21291c at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (NK179883) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm and membrane staining on NIH/3T3 cell line. The nuclear counter stain is DAPI (blue).

All lanes : Anti-GNA11 Antibody (Center) at 1:1000 dilution Lane 1: Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),



Peroxidase conjugated at 1/10000 dilution. Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.