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GNAQ Antibody

Rabbit mAb
Catalog # AP93078

Product Information

Application	WB
Primary Accession	P50148
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	CMC1; G alpha Q; G protein alpha Q ; GAQ; GNAQ;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	42142

Additional Information

Dilution	WB 1:500~1:2000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human GNAQ
Description	Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name	GNAQ (HGNC:4390)
Synonyms	GAQ
Function	Guanine nucleotide-binding proteins (G proteins) function as transducers downstream of G protein-coupled receptors (GPCRs) in numerous signaling cascades (PubMed:34556863, PubMed:35672283, PubMed:37991948). The alpha chain contains the guanine nucleotide binding site and alternates between an active, GTP-bound state and an inactive, GDP-bound state (PubMed:37991948). Signaling by an activated GPCR promotes GDP release and GTP binding (PubMed:37991948). The alpha subunit has a low GTPase activity that converts bound GTP to GDP, thereby terminating the signal (PubMed:37991948). Both GDP release and GTP hydrolysis are modulated by numerous regulatory proteins (PubMed:37991948). Signaling is mediated via phospholipase C-beta- dependent inositol lipid hydrolysis for signal propagation: activates phospholipase C-beta: following GPCR activation, GNAQ activates PLC- beta (PLCB1, PLCB2, PLCB3 or PLCB4), leading to production of diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3) (PubMed:37991948). Required for platelet activation (By similarity). Regulates

B-cell selection and survival and is required to prevent B- cell-dependent autoimmunity (By similarity). Regulates chemotaxis of BM-derived neutrophils and dendritic cells (in vitro) (By similarity). Transduces FFAR4 signaling in response to long-chain fatty acids (LCFAs) (PubMed:27852822). Together with GNA11, required for heart development (By similarity).

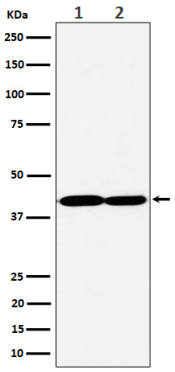
Cellular Location

Cell membrane; Peripheral membrane protein; Cytoplasmic side. Golgi apparatus. Nucleus {ECO:0000250|UniProtKB:P21279} Nucleus membrane {ECO:0000250|UniProtKB:P21279}. Note=Associated to the plasma membrane via lipid-anchor (PubMed:19001095). Colocalizes with the adrenergic receptors ADRA1A and ADRA1B at the nuclear membrane of cardiac myocytes (By similarity). {ECO:0000250|UniProtKB:P21279, ECO:0000269|PubMed:19001095}

Tissue Location

Predominantly expressed in ovary, prostate, testis and colon. Down-regulated in the peripheral blood lymphocytes (PBLs) of rheumatoid arthritis patients (at protein level)

Images



Western blot analysis of GNAQ expression in (1) HeLa cell lysate; (2) NIH/3T3 cell lysate.

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