

KD-Validated Anti-G protein subunit alpha q Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1960**Specification****KD-Validated Anti-G protein subunit alpha q Rabbit Monoclonal Antibody - Product Information**

Application	WB, ICC
Primary Accession	P50148
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 42 kDa , observed, 42 kDa
Gene Name	GNAQ
Aliases	G Protein Subunit Alpha Q; GAQ; G-ALPHA-Q; Guanine Nucleotide Binding Protein (G Protein), Q Polypeptide; Guanine Nucleotide-Binding Protein G(Q) Subunit Alpha; Guanine Nucleotide-Binding Protein Alpha-Q; Epididymis Secretory Sperm Binding Protein; CMAL; CMC1; SWS A synthesized peptide derived from human GNAQ
Immunogen	

KD-Validated Anti-G protein subunit alpha q Rabbit Monoclonal Antibody - Additional Information

Gene ID	2776
Other Names	
Guanine nucleotide-binding protein G(q) subunit alpha, 3.6.5.-, Guanine nucleotide-binding protein alpha-q, GNAQ, GAQ	

KD-Validated Anti-G protein subunit alpha q Rabbit Monoclonal Antibody - Protein Information**Name** GNAQ**Synonyms** GAQ**Function**

Guanine nucleotide-binding proteins (G proteins) function as transducers downstream of G protein-coupled receptors (GPCRs) in numerous signaling cascades (PubMed:[37991948](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/37991948)). Signaling by an activated GPCR promotes GDP release and GTP binding (PubMed:[37991948](http://www.uniprot.org/citations/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: 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; Lipid-anchor. Golgi apparatus. Nucleus {ECO:0000250|UniProtKB:P21279} Nucleus membrane {ECO:0000250|UniProtKB:P21279}. Note=Colocalizes with the adrenergic receptors, ADREN1A and ADREN1B, at the nuclear membrane of cardiac myocytes. {ECO:0000250|UniProtKB:P21279}

Tissue Location

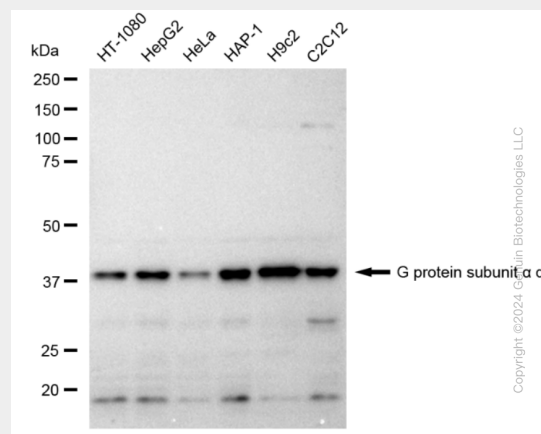
Predominantly expressed in ovary, prostate, testis and colon. Down-regulated in the peripheral blood lymphocytes (PBLs) of rheumatoid arthritis patients (at protein level)

KD-Validated Anti-G protein subunit alpha q Rabbit Monoclonal Antibody - Protocols

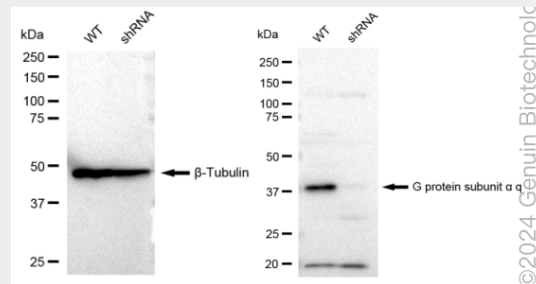
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

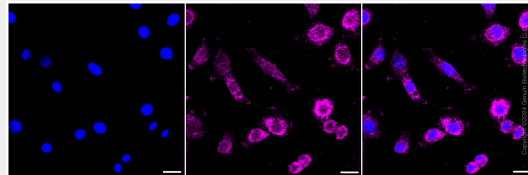
KD-Validated Anti-G protein subunit alpha q Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-G protein subunit alpha q antibody (Cat#AGI1960). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-G protein subunit alpha q antibody (Cat#AGI1960, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-G protein subunit alpha q antibody (Cat#AGI1960). G protein subunit alpha q expression in wild type (WT) and G protein subunit alpha q shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-G protein subunit alpha q antibody (Cat#AGI1960, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Immunocytochemical staining of C2C12 cells with G protein subunit alpha q antibody (Cat#AGI1960, 1:1,000). Nuclei were stained blue with DAPI; G protein subunit alpha q was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.