10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GNAQ Antibody (Internal)
Goat Polyclonal Antibody
Catalog # ALS14487

Specification

GNAQ Antibody (Internal) - Product Information

Application	**WB, IHC-P, E**
Primary Accession	P50148
Reactivity	**Human, Rat, Rabbit, Monkey, Pig, Bovine, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Calculated MW	**42kDa KDa**
Dilution	**WB~~1:1000 IHC-P~~N/A E~~N/A**

GNAQ Antibody (Internal) - Additional Information

Gene ID 2776

Other Names
Guanine nucleotide-binding protein G(q) subunit alpha, Guanine nucleotide-binding protein alpha-q, GNAQ, GAQ

Target/Specificity
Human GNAQ.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions
GNAQ Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

GNAQ Antibody (Internal) - 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). 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; 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)

GNAQ Antibody (Internal) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GNAQ Antibody (Internal) - Images

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GNAQ antibody (0.1 ug/ml) staining of Rat Testis lysate (35 ug protein/ml in RIPA buffer).

GNAQ Antibody (Internal) - Background

Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems. Regulates B-cell selection and survival and is required to prevent B-cell-dependent autoimmunity. Regulates chemotaxis of BM-derived neutrophils and dendritic cells (in vitro) (By similarity).

GNAQ Antibody (Internal) - References

Dong Q.,et al.Genomics 30:470-475(1995).
Chen B.,et al.Biochim. Biophys. Acta 1281:125-128(1996).
Johnson G.J.,et al.Biochem. J. 318:1023-1031(1996).
Gabbeta J.,et al.Thromb. Res. 91:29-32(1998).
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