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GNAQ / ALPHA-q (aa162-175) Antibody (internal region)

Peptide-affinity purified goat antibody
Catalog # AF3471a

Specification

GNAQ / ALPHA-q (aa162-175) Antibody (internal region) - Product Information

Application	**WB, E**
Primary Accession	P50148
Other Accession	NP_002063.2, 2776, 14682 (mouse), 81666 (rat)
Reactivity	**Human, Mouse, Rat**
Predicted	**Pig, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**42142**

GNAQ / ALPHA-q (aa162-175) Antibody (internal region) - Additional Information

Gene ID 2776

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

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
GNAQ / ALPHA-q (aa162-175) Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

GNAQ / ALPHA-q (aa162-175) Antibody (internal region) - 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 / ALPHA-q (aa162-175) Antibody (internal region) - 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 / ALPHA-q (aa162-175) Antibody (internal region) - Images

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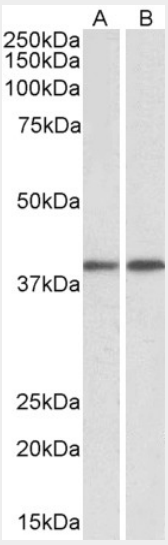
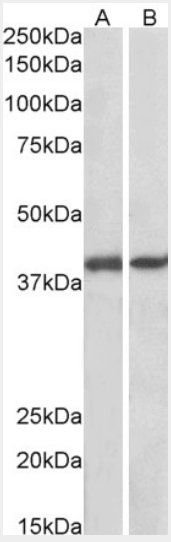
AF3471a (0.1 µg/ml) staining of Peripheral Blood Lymphocytes lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF3471a (0.1µg/ml) staining of Mouse (A) and Rat (B) Testis lysates (35µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF3471a (0.1µg/ml) staining of Pig Colon (A) and Pig Spleen (B) lysates (35µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

GNAQ / ALPHA-q (aa162-175) Antibody (internal region) - References

Interplay between the heterotrimeric G-protein subunits Galphaq and Galphai2 sets the threshold for chemotaxis and TCR activation. Ngai J, Inngjerdingen M, Berge T, TaskÃ©n K, BMC immunology 2009 10 : 27. PMID: 19426503