

Anti-GNAQ Antibody Picoband™ (monoclonal, 13H4)
Catalog # ABO14829**Specification****Anti-GNAQ Antibody Picoband™ (monoclonal, 13H4) - Product Information**

| | |
|-------------------|---------------------------|
| Application | WB, IHC, FC |
| Primary Accession | P50148 |
| Host | Mouse |
| Isotype | Mouse IgG2b |
| Reactivity | Rat, Human, Mouse, Monkey |
| Clonality | Monoclonal |
| Format | Lyophilized |

Description

Anti-GNAQ Antibody Picoband™ (monoclonal, 13H4) . Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500 µg/ml.

Anti-GNAQ Antibody Picoband™ (monoclonal, 13H4) - Additional Information

Gene ID 2776

Other Names

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

Calculated MW

42 kDa KDa

Application Details

Western blot, 0.1-0.5 µg/ml
 Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/ml
 Flow Cytometry, 1-3 µg/1x10⁶ cells

Subcellular Localization

Nucleus. Nucleus membrane. Membrane.

Tissue Specificity

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

Contents

Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human GNAQ, identical to the related mouse and rat sequences.

Cross Reactivity

No cross-reactivity with other proteins.

Storage

Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.

Anti-GNAQ Antibody Picoband™ (monoclonal, 13H4) - Protein Information

Name GNAQ

Synonyms GAQ

Function

Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems. Required for platelet activation. 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). 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

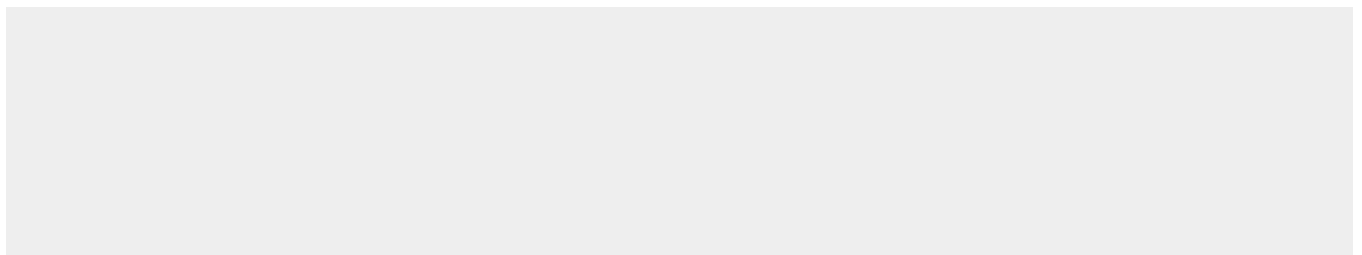
Predominantly expressed in ovary, prostate, testis and colon. Down-regulated in the peripheral blood lymphocytes (PBLs) of rheumatoid arthritis patients (at protein level)

Anti-GNAQ Antibody Picoband™ (monoclonal, 13H4) - 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](#)

Anti-GNAQ Antibody Picoband™ (monoclonal, 13H4) - Images



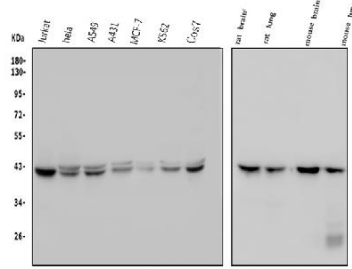


Figure 1. Western blot analysis of GNAQ using anti-GNAQ antibody (M00898). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

- Lane 1: human Jurkat whole cell lysates,
- Lane 2: human Hela whole cell lysates,
- Lane 3: human A549 whole cell lysates.
- Lane 4: human A431 whole cell lysates,
- Lane 5: human MCF-7 whole cell lysates,
- Lane 6: human K562 whole cell lysates,
- Lane 7: monkey COS-7 whole cell lysates,
- Lane 8: rat brain tissue lysates,
- Lane 9: rat lung tissue lysates,
- Lane 10: mouse brain tissue lysates,
- Lane 11: mouse lung tissue lysates,

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-GNAQ antigen affinity purified monoclonal antibody (Catalog # M00898) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for GNAQ at approximately 42KD. The expected band size for GNAQ is at 42KD.

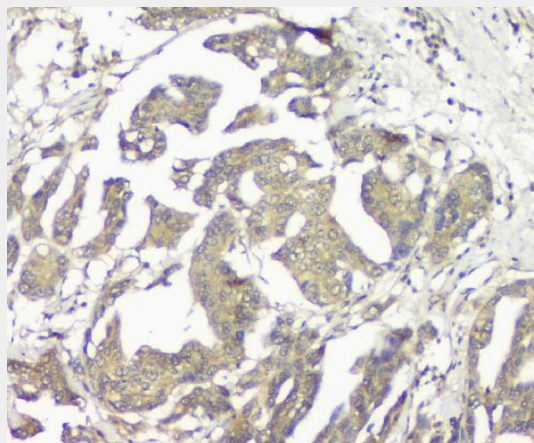


Figure 2. IHC analysis of GNAQ using anti GNAQ antibody (M00898). GNAQ was detected in paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-GNAQ Antibody (M00898) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

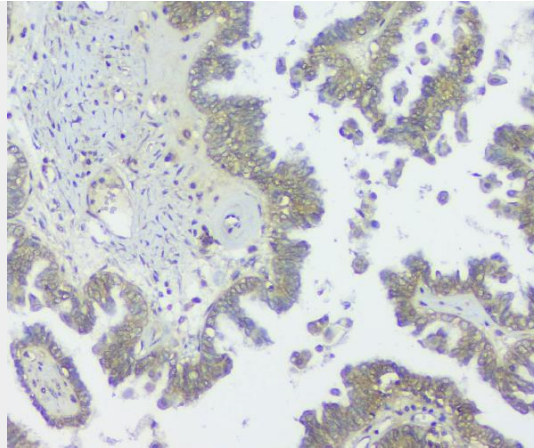


Figure 3. IHC analysis of GNAQ using anti GNAQ antibody (M00898). GNAQ was detected in paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml mouse anti-GNAQ Antibody (M00898) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

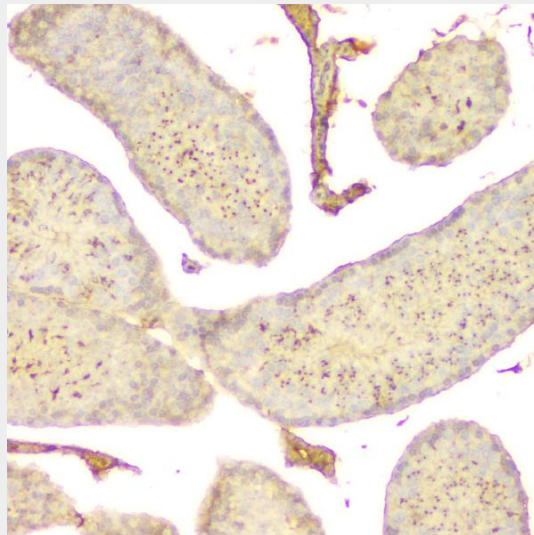


Figure 4. IHC analysis of GNAQ using anti GNAQ antibody (M00898). GNAQ was detected in paraffin-embedded section of mouse testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml mouse anti-GNAQ Antibody (M00898) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

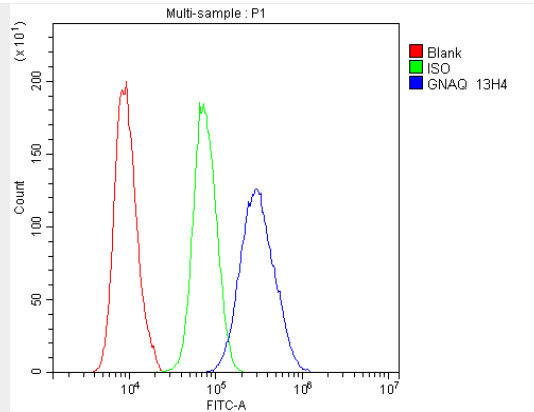


Figure 5. Flow Cytometry analysis of U20S cells using anti-GNAQ antibody (M00898). Overlay histogram showing U20S cells stained with M00898 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-GNAQ Antibody (M00898, 1 $\mu\text{g}/1 \times 10^6$ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 $\mu\text{g}/1 \times 10^6$ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 $\mu\text{g}/1 \times 10^6$) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-GNAQ Antibody Picoband™ (monoclonal, 13H4) - Background

Guanine nucleotide-binding protein G (q) subunit alpha is a protein that in humans is encoded by the GNAQ gene. Guanine nucleotide-binding proteins are a family of heterotrimeric proteins that couple cell surface, 7-transmembrane domain receptors to intracellular signaling pathways. Receptor activation catalyzes the exchange of GDP for GTP bound to the inactive G protein alpha subunit resulting in a conformational change and dissociation of the complex. The G protein alpha and beta-gamma subunits are capable of regulating various cellular effectors. Activation is terminated by a GTPase intrinsic to the G-alpha subunit. G-alpha-q is the alpha subunit of one of the heterotrimeric GTP-binding proteins that mediates stimulation of phospholipase C-beta. Mutations in this gene have been found associated to cases of Sturge-Weber syndrome and port-wine stains.