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antibody and ELISA experts

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-GNAQ Antibody Picoband® (monoclonal, 13H4)

Catalog Number: M00898

About GNAQ

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.

Overview

Product Name	Anti-GNAQ Antibody Picoband® (monoclonal, 13H4)
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-GNAQ Antibody Picoband® (monoclonal, 13H4) catalog # M00898. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IHC, WB
Clonality	Monoclonal 13H4
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	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.
Host	Mouse
Uniprot ID	P50148

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human GNAQ, identical to the related mouse and rat sequences.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b

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Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Flow Cytometry (Fixed), 1-3ug/1x10^6 cells

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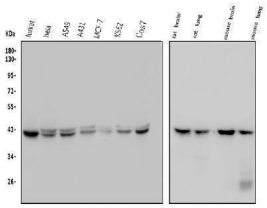
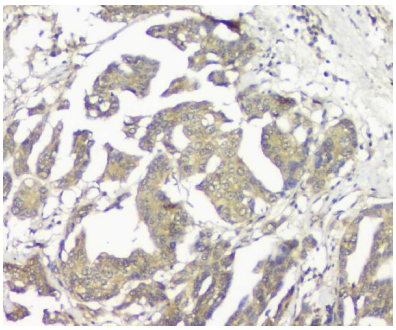
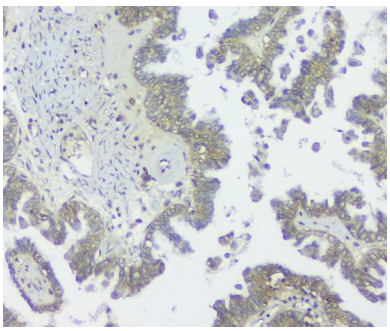
Anti-GNAQ Antibody Picoband® (monoclonal, 13H4) (M00898) Images



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 ug/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.



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 1ug/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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.



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IHC analysis of GNAQ using anti GNAQ antibody (M00898). GNAQ was detected in paraffin-embedded section of mouse

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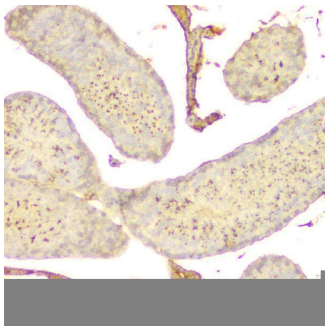

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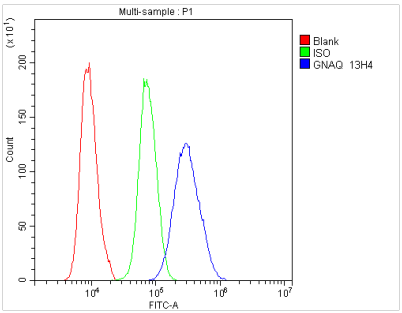

Flow Cytometry analysis of U20S cells using anti- GNAQ antibody (M00898). Overlay histogram showing U20S cells stained with M00898 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-GNAQ Antibody (M00898, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Anti-GNAQ Antibody (monoclonal, 13H4)

For Research Use Only. Not for use in diagnostic procedures.