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Anti-GIP Antibody Picoband®

Catalog Number: PB9946

About GIP

Gastric inhibitory polypeptide (GIP), also known as the glucose-dependent insulinotropic peptide, is an inhibiting hormone of the secretin family of hormones. GIP is thought to have significant effects on fatty acid metabolism through stimulation of lipoprotein lipase activity in adipocytes. Additionally, GIP release has been demonstrated in the ruminant animal and may play a role in nutrient partitioning in milk production (lipid metabolism). Recently, GIP appeared as a major player in bone remodelling. It was evidenced that genetic ablation of the GIP receptor in mice resulted in profound alterations of bone microarchitecture through modification of the adipokine network. Furthermore, the deficiency in GIP receptors has also been associated in mice with a dramatic decrease in bone quality and a subsequent increase in fracture risk.

Overview

Product Name	Anti-GIP Antibody Picoband®
Reactive Species	Human, Rat
Description	Boster Bio Anti-GIP Antibody Picoband® catalog # PB9946. Tested in IHC, WB applications. This antibody reacts with Human, 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	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg 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	Rabbit
Uniprot ID	P09681

Technical Details

Immunogen	E. coli-derived human GIP recombinant protein (Position: Y52-Q93). Human GIP shares 92.9% and 95.2% amino acid (aa) sequence identity with mouse and rat GIP, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG

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Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Rat

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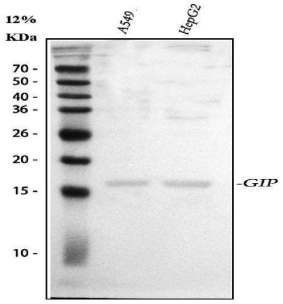
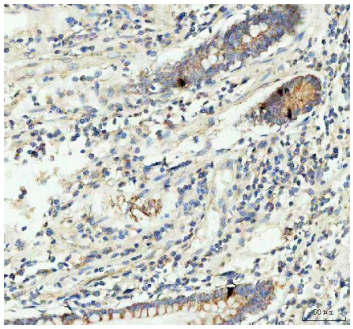
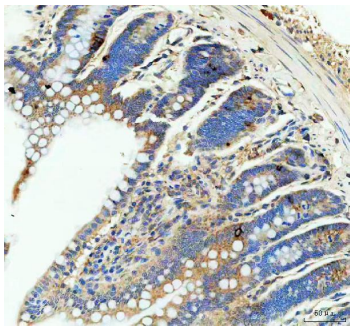
Anti-GIP Antibody Picoband® (PB9946) Images



Western blot analysis of GIP using anti-GIP antibody (PB9946). 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 30 ug of sample under reducing conditions. Lane 1: human A549 whole cell lysates, Lane 2: human HepG2 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GIP antigen affinity purified polyclonal antibody (Catalog # PB9946) 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-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for GIP at approximately 17 kDa. The expected band size for GIP is at 17 kDa.



IHC analysis of GIP using anti-GIP antibody (PB9946). GIP was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GIP Antibody (PB9946) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of GIP using anti-GIP antibody (PB9946). GIP was detected in a paraffin-embedded section of rat intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GIP Antibody (PB9946) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

Alterations of the protein levels of the components of the GSK-3beta—beta-catenin—TCF7L2—GLP-1 axis under varying glucose conditions. (A) Molecular structure of Emodin. (B) Relative protein levels of p-GSK-3beta, GSK-3beta, beta-catenin and TCF7L2 in Control and Emodin groups under different glucose conditions, detected by the western blot analysis. (C) Relative mRNA expression of

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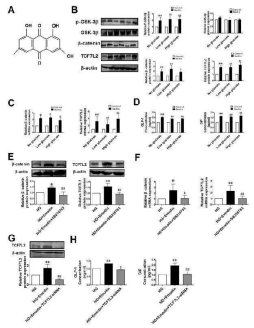
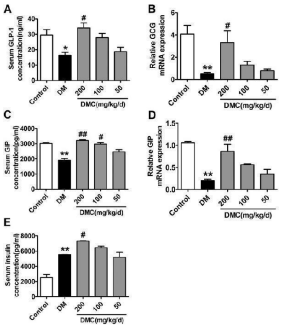
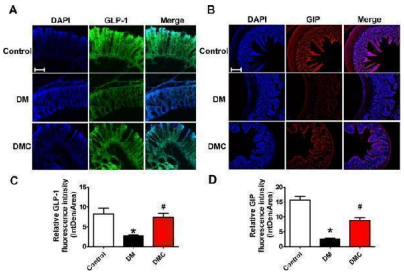


beta-catenin and TCF7L2 in Control and Emodin groups under different glucose conditions, detected by real-time PCR. (D) GLP-1 and GIP concentration measured by ELISA in the cell supernatant in Control and Emodin groups under different glucose conditions. *p<0.05, **p<0.01 vs control under no glucose, # p<0.05, ## p<0.01 vs control under low glucose, &p<0.05, && p<0.01 vs control under high glucose; mean ± SEM. (E,F) Inhibition of TCF7L2 and GSK-3beta abolished DMC's effects. (E) Effects of emodin (the main component of DMC) and SB216763 (a specific GSK-3beta inhibitor) on the protein levels of beta-catenin and TCF7L2 under HG (high glucose) conditions. (F) Relative mRNA expression of beta-catenin and TCF7L2 in the three groups. (G) Relative protein expression of TCF7L2 in HG, HG + emodin and HG + emodin + TCF7L2 SiRNA groups. (H) GLP-1 and GIP concentration measured by ELISA in the cell supernatant in the three groups. *p<0.05, **p<0.01 vs HG, #p<0.05, ##p<0.01 vs HG + Emodin; mean ± SEM. Index in PubMed under a CC BY license. PMID: 27721485



GLP-1 and GIP concentrations in the serum and mRNA levels of GCG and GIP. (A) GLP-1 concentrations in the serum in the in the Control, DM and DMC groups. (B) GCG (the gene encoding GLP-1) mRNA levels in ileum. (C) GIP concentrations in the serum in the five groups. (D) GIP mRNA levels in ileum. (E) Insulin levels in the serum in the five groups. *p<0.05, **p<0.01 vs Control, # p<0.05, ## p<0.01 vs DM; mean ± SEM. Index in PubMed under a CC BY license. PMID: 27721485



Expression of GLP-1 and GIP in ileum. (A) Images (×400) of immunofluorescence staining of GLP-1 (glucagon-like peptide-1) and GIP (gastric inhibitory polypeptide) expression in ileum in the Control, DM and DMC groups. (B) Immunofluorescence results (×400) indicating GIP expression. (scale bar: 20um). (C) Quantification of the GLP-1 fluorescence intensity (integrated density per stained area). (D) Quantification of the GIP fluorescence intensity (integrated density per stained area). *p<0.05 vs Control, # p<0.05 vs DM; mean ± SEM. Index in PubMed under a CC BY license. PMID: 27721485

Anti-GIP Antibody

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