BOSTER
antibody and ELISA experts

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

Anti-GRP78 BiP/HSPA5 Antibody Picoband™

Catalog Number: PB9640

About HSPA5

HSPA5 (heat shock 70kDa protein 5), also known as glucose-regulated protein, 78kD (GRP78) or BiP, is a member of the heat-shock protein-70 (HSP70) family and is involved in the folding and assembly of proteins in the endoplasmic reticulum. BiP is also an essential component of the translocation machinery, as well as playing a role in retrograde transport across the ER membrane of aberrant proteins destined for degradation by the proteasome. The HSPA5 gene is mapped on 9q33.3. Shen et al. (2002) concluded that HSPA5 retains ATF6 in the ER by inhibiting its Golgi localization signals and that dissociation of HSPA5 during ER stress allows ATF6 to be transported to the Golgi. The findings of Shen et al. (2002) demonstrated that HSPA5 is a key element in sensing the folding capacity within the ER.

Overview

Product Name	Anti-GRP78 BiP/HSPA5 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-GRP78 BiP/HSPA5 Antibody Picoband™ catalog # PB9640. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
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	P11021

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human GRP78 BiP, identical to the related mouse and rat sequences.
Predicted Reactive Species	Hamster
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
Form	Lyophilized

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

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Mouse, Rat, By Heat

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

Anti-GRP78 BiP/HSPA5 Antibody Picoband™ (PB9640) Images

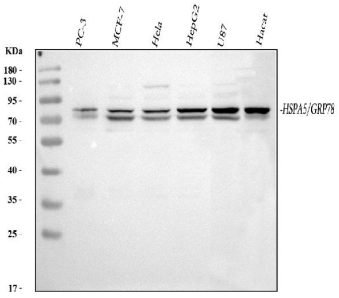

Figure 1. Western blot analysis of GIP using anti-GIP antibody (PB9640).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human PC-3 whole cell lysates,
Lane 2: human MCF-7 whole cell lysates,
Lane 3: human Hela whole cell lysates,
Lane 4: human HepG2 whole cell lysates,
Lane 5: human U87 whole cell lysates,
Lane 6: human Hacat 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 # PB9640) 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 72 kDa. The expected band size for GIP is at 72 kDa.

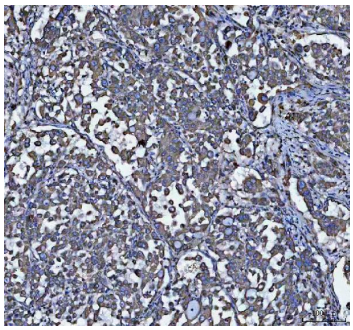

Figure 2. IHC analysis of GIP using anti-GIP antibody (PB9640).
GIP was detected in a paraffin-embedded section of human lung adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GIP Antibody (PB9640) 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.

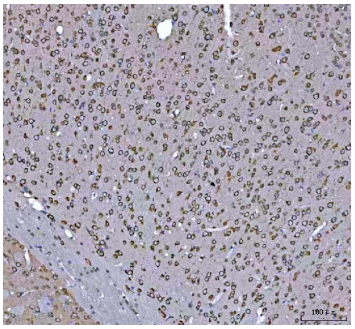

Figure 3. IHC analysis of GIP using anti-GIP antibody (PB9640).
GIP was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GIP Antibody (PB9640) 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.

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

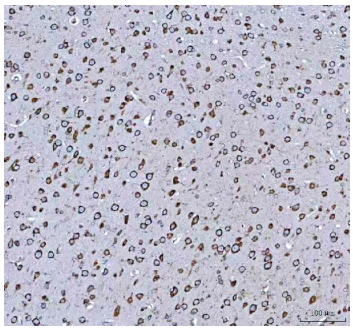

Figure 4. IHC analysis of GIP using anti-GIP antibody (PB9640).
GIP was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GIP Antibody (PB9640) 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.

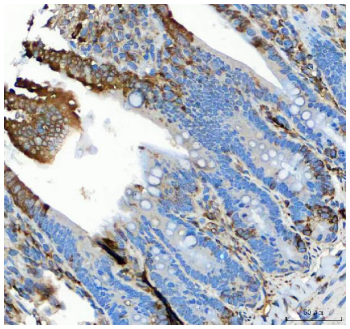

Figure 5. IHC analysis of GIP using anti-GIP antibody (PB9640).
GIP was detected in a paraffin-embedded section of rat colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GIP Antibody (PB9640) 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.

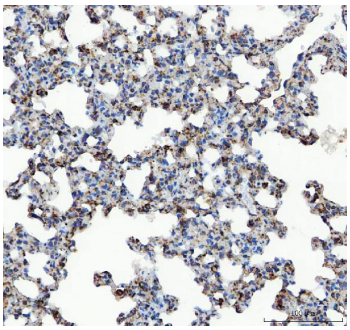

Figure 6. IHC analysis of GIP using anti-GIP antibody (PB9640).
GIP was detected in a paraffin-embedded section of rat lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GIP Antibody (PB9640) 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.

8 Publications Citing This Product

1. PubMed ID: 31500865, Chi L,Jiao D,Nan G,Yuan H,Shen J,Gao Y.miR-9-5p attenuates ischemic stroke through targeting ERMP1-mediated endoplasmic reticulum stress.Acta Histochem.2019 Nov;121(8):151438.doi:10.1016/j.acthis.2019.08.005.Epub 2019 Sep 7.PMID:31500865.

2. PubMed ID: 33819629, Huang Y,Zhao C,Kong Y,Tan P,Liu S,Liu Y,Zeng F,Yuan Y,Zhao B,Wang J.Elucidation of the mechanism of NEFA-induced PERK-eIF2alpha signaling pathway regulation of lipid metabolism in bovine hepatocytes.J Steroid Biochem Mol Biol.2021 Apr 2:105893.doi:10.1016/j.jsbmb.2021.105893.Epub ahead of print.PMID:33819629.

3. PubMed ID: -, Pei-pei Fang,Chen-wei Pan,Wei Lin,Jie Li,Shan-shan Huang,Guang-yao Zhou,Wen-jun Du,Qiang Li, "ASK1 Enhances Angiotensin II-Induced Liver Fibrosis In Vitro by Mediating Endoplasmic Reticulum Stress-Dependent Exosomes",Mediators of Inflammation,vol.2020,Art

Visit bosterbio.com/anti-grp78-bip-picoband-trade-antibody-pb9640-boster.html to see all 8 publications.

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

Submit a product review to Biocompare.com

Anti-GRP78 BiP/HSPA5 Antibody ™