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antibody and ELISA experts

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Anti-Connexin 32/GJB1 Antibody Picoband®

Catalog Number: PA1367

About GJB1

Gap junction beta-1 protein (GJB1), also known as connexin 32 (Cx32) is a transmembrane protein that in humans is encoded by the GJB1 gene. This gene encodes a member of the gap junction protein family. The gap junction proteins are membrane-spanning proteins that assemble to form gap junction channels that facilitate the transfer of ions and small molecules between cells. According to sequence similarities at the nucleotide and amino acid levels, the gap junction proteins are divided into two categories, alpha and beta. Mutations in this gene cause X-linked Charcot-Marie-Tooth disease, an inherited peripheral neuropathy. Alternatively spliced transcript variants encoding the same protein have been found for this gene.

Overview

Product Name	Anti-Connexin 32/GJB1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Connexin 32/GJB1 Antibody catalog # PA1367. Tested in IHC, WB applications. This antibody reacts with Human, 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	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	P08034

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human Connexin 32/GJB1, identical to the related mouse and rat sequences.
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	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Western blot, 0.1-0.5ug/ml, Human, Rat, Mouse

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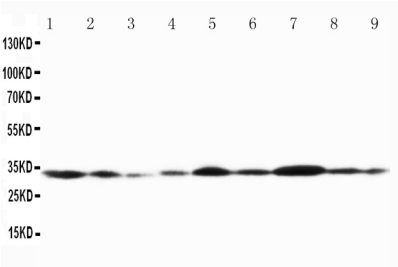
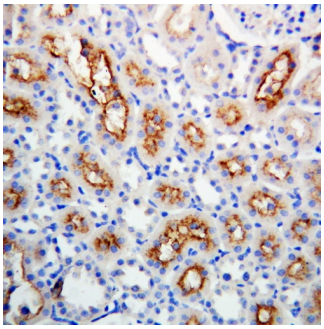
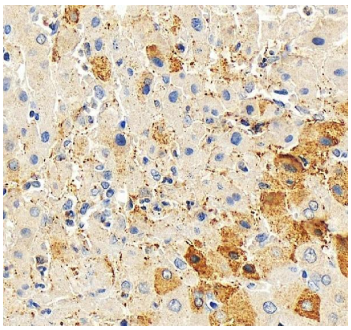
Anti-Connexin 32/GJB1 Antibody Picoband® (PA1367) Images



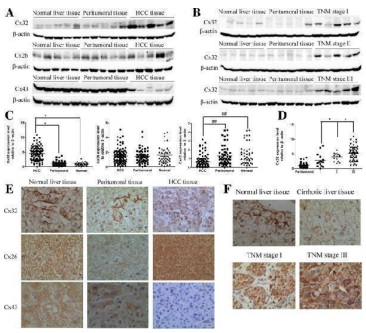
Anti-Connexin 32/GJB1 antibody, PA1367, Western blottingLane 1: Rat Cardiac Muscle Tissue LysateLane 2: Rat Cardiac Muscle Tissue LysateLane 3: Rat Skeletal Muscle Tissue LysateLane 4: Rat Brain Tissue LysateLane 5: MCF-7 Cell LysateLane 6: HELA Cell Lysate Lane 7: SMMC Cell Lysate Lane 8: JURKAT Cell Lysate Lane 9: COLO320 Cell Lysate



Anti-Connexin 32/GJB1 antibody, PA1367, IHC(P)IHC(P):Rat Kidney Tissue



IHC analysis of Connexin-32/GJB1 using anti-Connexin-32/GJB1 antibody (PA1367). Connexin-32/GJB1 was detected in a paraffin-embedded section of human liver 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-Connexin-32/GJB1 Antibody (PA1367) 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.



Expression and distribution of Cx32, Cx26 and Cx43 in patients with HCC. a. The protein expression levels of Cx32, Cx26 and Cx43 were determined by western blot analysis. beta-actin was used as the loading control. b. The expression of Cx32 was correlated with increased TNM stages, as revealed by western blot analysis. beta-actin was used as the loading control. c . Statistical analysis of the relative expression levels of Cxs in HCC tissues, peritumoral tissues, and normal liver tissues. ** , P

Kaplan-Meier analysis. Patients in the low Cx32 group (n = 48) had significantly longer overall survival (OS) times than those in the high Cx32 group (n = 48) (P = 0.014, log-rank test) Index in PubMed under a CC BY license. PMID: 30947731

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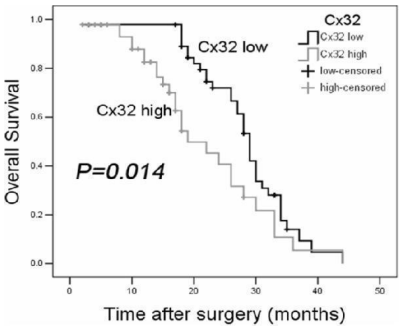
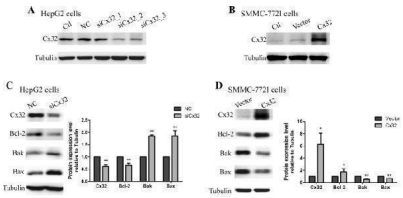
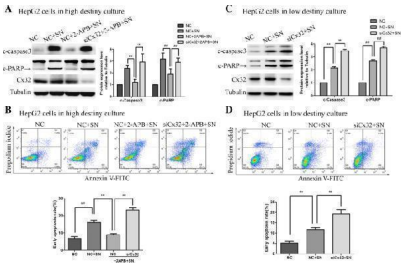
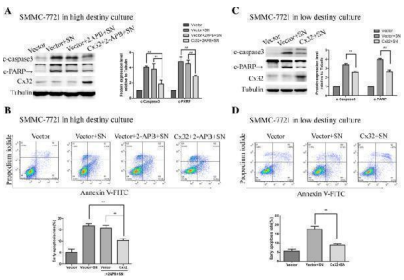




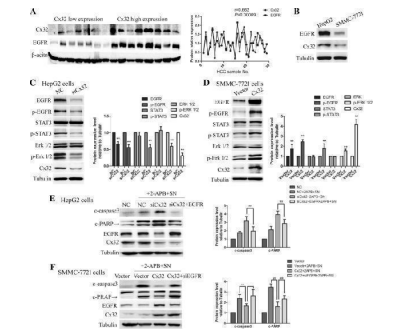
Cx32 regulates the expression of Bcl-2 family proteins in HCC cell lines. a. Cx32 expression was knocked down in HepG2 cells by siRNA transfection. siCx32_2 showed the greatest efficiency in reducing Cx32 expression. b. Transient plasmid transfection into SMMC-7721 cells induced Cx32 overexpression. c. Silencing Cx32 expression in HepG2 cells increased the expression levels of Bax and Bak but decreased the expression level of Bcl-2 (n = 3). ** , P



Cx32 exerts an anti-apoptotic effect on HepG2 cells in a GJ-independent manner. a. When GJ function was inhibited by pretreatment with 2-APB (50 um, 2 h), knockdown of Cx32 promoted the SN-induced increase in the levels of cleaved-caspase3 and cleaved-PRAR in HepG2 cells, as revealed by western blot analysis (n = 3). ** , P



Overexpressed Cx32 exerts an anti-apoptotic effect on SMMC-7721 cells in a GJ-independent manner. a. When GJ function was inhibited by pretreatment with 2-APB, overexpression of Cx32 alleviated the SN-induced increase in the levels of cleaved-caspase3 and cleaved-PARP in SMMC-7721 cells, as revealed by western blot analysis (n = 3). ** , P



Cx32 exerts anti-apoptotic effects by activating EGFR signaling pathway. a. In 30 HCC specimens, the expression of EGFR was significantly correlated with the expression of Cx32 (r = 0.662, P

Cx32 upregulates the expression and activation of EGFR by binding with Src. a and b. In HCC cell lines, silencing or overexpressing Cx32 caused Src downregulation or upregulation, respectively. ** , P

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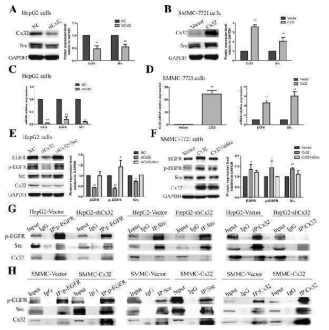

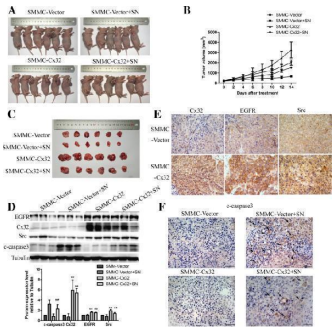

Overexpression of Cx32 promotes the proliferation of SMMC-7721 cells and protects cells from SN-induced apoptosis in vivo. a. Representative images of the nude xenograft model. b. Tumor growth curves. Overexpression of Cx32 promoted the tumor growth in nude mice and significantly reduced the growth suppression mediated by intragastric injection of SN (0.5 mg/kg). c. Representative images of tumors from the sacrificed nude mice. d. Representative images of IHC for Cx32, EGFR and Src in tumors generated from SMMC-Vector and SMMC-Cx32 cells. Scale bars: 50 um. e. Overexpression of Cx32 inhibited the SN-induced increase in the levels of cleaved-caspase3 by increasing the levels of EGFR and Src. ## , P

Anti-Connexin 32/GJB1 Antibody

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