

Anti-Connexin 45/GJA7 Picoband Antibody

Catalog # ABO10340

Product Information

Application	WB, IHC-P
Primary Accession	P36383
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Gap junction gamma-1 protein(GJC1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	10052
Other Names	Gap junction gamma-1 protein, Connexin-45, Cx45, Gap junction alpha-7 protein, GJC1, GJA7
Calculated MW	45470
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 µg/ml, Rat, Human
Subcellular Localization	Cell membrane; Multi-pass membrane protein. Cell junction, gap junction.
Source	Eukaryota
Protein Name	Gap junction gamma-1 protein
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human Connexin 45/GJA7 (91-131aa YLGYAIHKIAKMEHGEADKKAARSKPYAMRWKQHRALEETE), identical to the related mouse and rat sequences.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20 °C for one year. After reconstitution, at 4 °C for one month. It can also

be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.

Protein Information

Name	GJC1
Synonyms	GJA7
Function	Structural component of the gap junction, a specialized intercellular structure consisting of a cluster of closely packed pairs of transmembrane channels, the connexons, that allow passage of small molecules and electrical signals between neighboring cells. Forms homotypic and heterotypic channels gated by transjunctional voltage (By similarity). Involved in intercellular innate immune signaling. Mediates translocation of 2',3'-cGAMP and 2',5'-oligoadenylates (2-5A) second messengers from virus-infected cells to macrophages and uninfected neighboring cells to propagate and amplify the antiviral immune response (PubMed: 24077100 , PubMed: 31992625 , PubMed: 40010341).
Cellular Location	Cell membrane; Multi-pass membrane protein. Cell junction, gap junction

Background

Gap junction gamma-1 protein (GJC1), also known as gap junction alpha-7 protein (GJA7) or connexin 45 (Cx45), is a protein that in humans is encoded by the GJC1 gene. The International Radiation Hybrid Mapping Consortium mapped the GJA7 gene to chromosome 17q21.31. This gene is a member of the connexin gene family. The encoded protein is a component of gap junctions, which are composed of arrays of intercellular channels that provide a route for the diffusion of low molecular weight materials from cell to cell.

Images

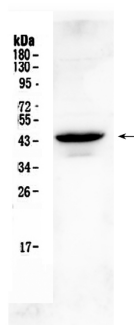
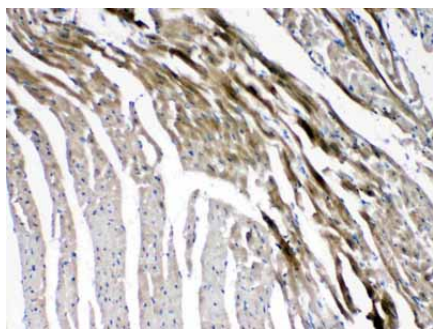


Figure 1. Western blot analysis of Connexin 45/GJA7 using anti- Connexin 45/GJA7 antibody (ABO10340). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat testis 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 rabbit anti- Connexin 45/GJA7 antigen affinity purified polyclonal antibody (Catalog # ABO10340) 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-rabbit 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 with Tanon 5200 system. A specific band was detected for Connexin 45/GJA7 at approximately 45KD. The expected band size for Connexin 45/GJA7 is at 45KD.

Figure 2. IHC analysis of Connexin 45/GJA7 using anti-Connexin 45/GJA7 antibody (ABO10340).Connexin



45/GJA7 was detected in paraffin-embedded section of mouse cardiac muscle tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti- Connexin 45/GJA7 Antibody (ABO10340) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

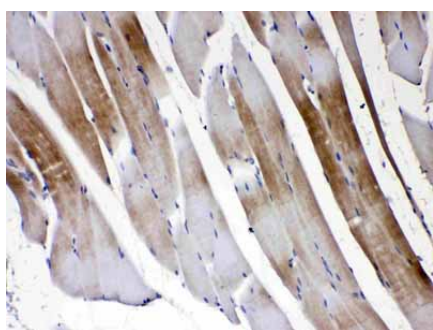


Figure 3. IHC analysis of Connexin 45/GJA7 using anti-Connexin 45/GJA7 antibody (ABO10340).Connexin 45/GJA7 was detected in paraffin-embedded section of rat skeletal muscle tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti- Connexin 45/GJA7 Antibody (ABO10340) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

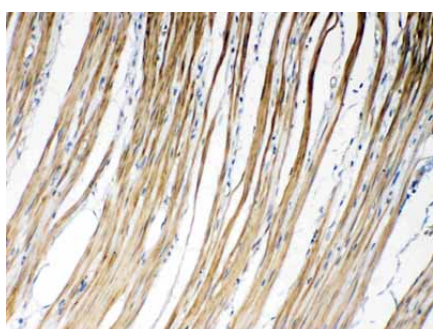


Figure 4. IHC analysis of Connexin 45/GJA7 using anti-Connexin 45/GJA7 antibody (ABO10340).Connexin 45/GJA7 was detected in paraffin-embedded section of human intestinal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti- Connexin 45/GJA7 Antibody (ABO10340) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

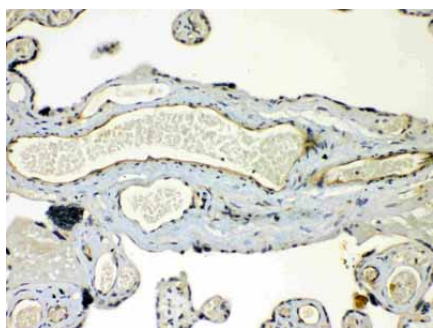


Figure 5. IHC analysis of Connexin 45/GJA7 using anti-Connexin 45/GJA7 antibody (ABO10340).Connexin 45/GJA7 was detected in paraffin-embedded section of human placenta tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti- Connexin 45/GJA7 Antibody (ABO10340) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.