

Anti-Galectin 3/LGALS3 Antibody Picoband™

Catalog Number: PB9081

About LGALS3

Galectin-3 (GAL3), also known as LGALS3, MAC2 or GALBP, is a member of the lectin family, of which 14 mammalian galectins have been identified. Galectin-3 is encoded by a single gene, it located on chromosome 14, locus q21-q22. It is expressed in the nucleus, cytoplasm, mitochondrion, cell surface, and extracellular space. Studies have also shown that the expression of galectin-3 is implicated in a variety of processes associated with heart failure, including myofibroblast proliferation, fibrogenesis, tissue repair, inflammation, and Ventricular remodeling. Galectin-3 is expressed in various tissues and organs, but is significantly absent in normal hepatocytes.

Overview

Product Name	Anti-Galectin 3/LGALS3 Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-Galectin 3/LGALS3 Antibody Picoband™ catalog # PB9081. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
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	P17931

Technical Details

Immunogen	E.coli-derived human Galectin 3 recombinant protein (Position: K139-I250). Human Galectin 3 shares 88% and 84% amino acid (aa) sequences identity with mouse and rat Galectin 3, respectively.
Predicted Reactive Species	Bovine, Canine, Monkey, Rabbit
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) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
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), 0.5-1ug/ml, Human, By Heat Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry, 1-3ug/1x10⁶ cells, Human

Anti-Galectin 3/LGALS3 Antibody Picoband™ (PB9081) Images

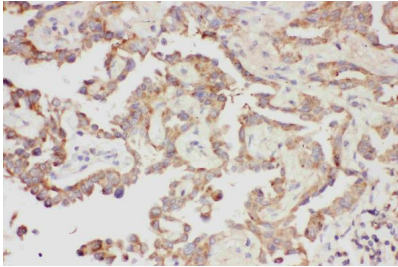


Figure 1. IHC analysis of Galectin-3 using anti-Galectin-3 antibody (PB9081).

Galectin-3 was detected in paraffin-embedded section of Human Lung Cancer Tissue. 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 1ug/ml rabbit anti-Galectin-3 Antibody (PB9081) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

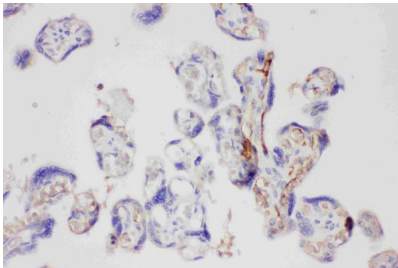


Figure 2. IHC analysis of Galectin-3 using anti-Galectin-3 antibody (PB9081).

Galectin-3 was detected in paraffin-embedded section of Human Placenta Tissue. 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 1ug/ml rabbit anti-Galectin-3 Antibody (PB9081) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

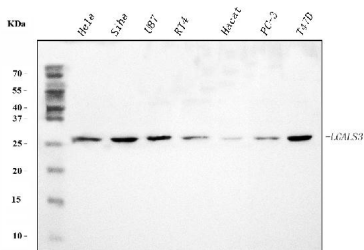


Figure 3. Western blot analysis of Galectin-3 using anti-Galectin-3 antibody (PB9081).

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 Hela whole cell lysates,
Lane 2: human SiHa whole cell lysates,
Lane 3: human U87 whole cell lysates,
Lane 4: human H460 whole cell lysates,
Lane 5: human PC-3 whole cell lysates,
Lane 6: human T47D 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-Galectin-3 antigen affinity purified polyclonal antibody (Catalog # PB9081) 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 Galectin-3 at approximately 26 kDa. The expected band size for Galectin-3 is at 26 kDa.

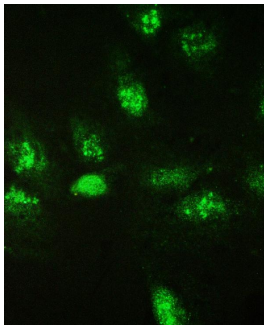


Figure 4. IF analysis of Galectin-3 using anti-Galectin-3 antibody (PB9081).

Galectin-3 was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-Galectin-3 Antibody (PB9081) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

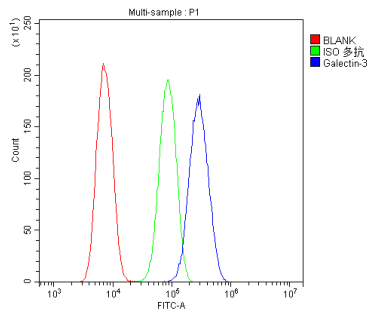


Figure 5. Flow Cytometry analysis of U2OS cells using anti-Galectin-3 antibody (PB9081).

Overlay histogram showing U2OS cells stained with PB9081 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Galectin-3 Antibody (PB9081, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

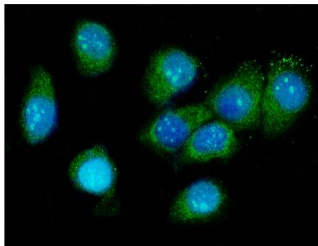


Figure 6. IF analysis of Galectin-3 using anti-Galectin-3 antibody (PB9081).

Galectin-3 was detected in an immunocytochemical section of SiHa cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-Galectin-3 Antibody (PB9081) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

4 Publications Citing This Product

1. PubMed ID: 10.3389/fimmu.2021.639260, Galectin-Receptor Interactions Regulates Cardiac Pathology Caused by Trichinella spiralis Infection.
2. PubMed ID: 10.3892/etm.2019.7227, Expression of galectin-3 and apoptosis in placental villi from patients with missed abortion during early pregnancy
3. PubMed ID: 10.1155/2021/3210586, Insulin Receptor Substrate p53 Ameliorates High-Glucose-Induced Activation of NF-kappaB and Impaired Mobility of HUVECs

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