BOSTER
antibody and ELISA experts

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Anti-CD147/Emmprin/BSG Antibody Picoband™

Catalog Number: A00248-1

About BSG

Emmprin, extracellular matrix metalloproteinase inducer, also known as Emmprin (BSG) or cluster of differentiation 147 (CD147) is a protein that in humans is encoded by the Emmprin gene. The human BSG gene is mapped to 19p13.3. This protein is a determinant for the Ok blood group system. BSG has been shown to be an essential receptor on red blood cells for the malaria parasite. It is a member of the immunoglobulin superfamily, with a structure related to the putative primordial form of the family. As members of the immunoglobulin superfamily, it plays fundamental roles in intercellular recognition involved in various immunologic phenomena, differentiation, and development. BSG is thought also to play a role in intercellular recognition. It also regulates several distinct functions, such as spermatogenesis, expression of the monocarboxylate transporter and the responsiveness of lymphocytes. BSG is a type I integral membrane receptor that has many ligands, including the cyclophilin (CyP) proteins Cyp-A and CyP-B and certain integrins. It is expressed by many cell types, including epithelial cells, endothelial cells and leukocytes.

Overview

Product Name	Anti-CD147/Emmprin/BSG Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-CD147/Emmprin/BSG Antibody Picoband™ catalog # A00248-1. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human.
Application	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg 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	P35613

Technical Details

Immunogen	E.coli-derived human CD147/Emmprin recombinant protein (Position: E138-A323). Human CD147/Emmprin shares 51.1% and 51.9% amino acid (aa) sequence identity with mouse and rat CD147/Emmprin, respectively.
Predicted Reactive Species	Chicken
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

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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 Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Immunofluorescence, 2ug/ml, Human Flow Cytometry, 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, Human

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Anti-CD147/Emmprin/BSG Antibody Picoband™ (A00248-1) Images

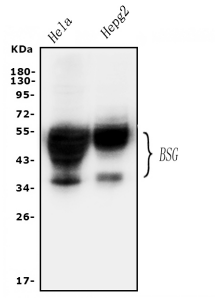

Figure 1. Western blot analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (A00248-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human 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-CD147/Emmprin antigen affinity purified polyclonal antibody (Catalog # A00248-1) 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 CD147/Emmprin at approximately 38-55 kDa. The expected band size for CD147/Emmprin is at 42 kDa.

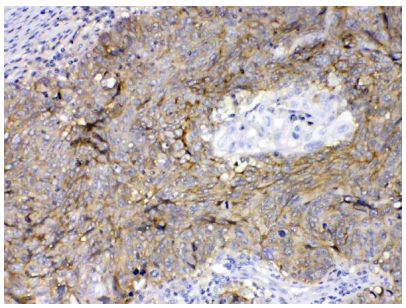

Figure 2. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (A00248-1).
CD147/Emmprin was detected in paraffin-embedded section of human lung cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CD147/Emmprin Antibody (A00248-1) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

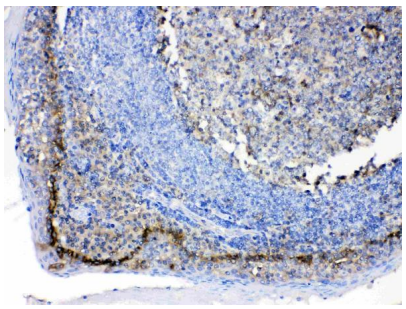

Figure 3. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (A00248-1).
CD147/Emmprin was detected in paraffin-embedded section of human tonsil tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CD147/Emmprin Antibody (A00248-1) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of CD147/Emmprin using anti-

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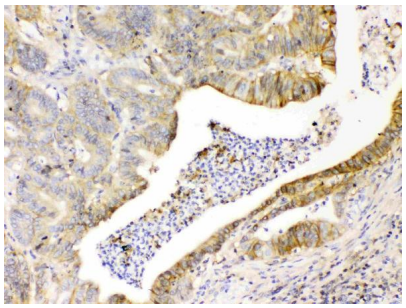

CD147/Emmprin antibody (A00248-1).
CD147/Emmprin was detected in paraffin-embedded section of human intestinal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CD147/Emmprin Antibody (A00248-1) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

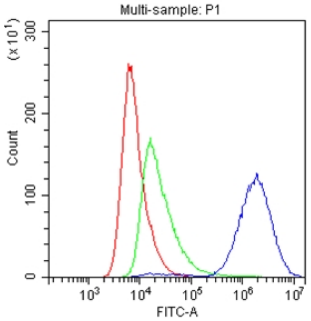

Figure 5. Flow Cytometry analysis of A549 cells using anti-CD147/Emmprin antibody (A00248-1).
Overlay histogram showing A549 cells stained with A00248-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CD147/Emmprin Antibody (A00248-1,1ug/1x106 cells) for 30 min at 20°C. DyLight488 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.

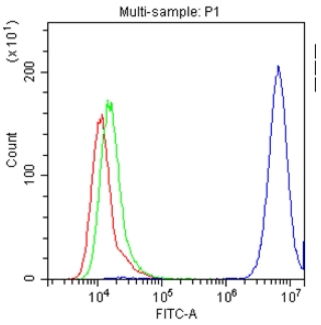

Figure 6. Flow Cytometry analysis of Hela cells using anti-CD147/Emmprin antibody (A00248-1).
Overlay histogram showing Hela cells stained with A00248-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CD147/Emmprin Antibody (A00248-1,1ug/1x106 cells) for 30 min at 20°C. DyLight488 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.

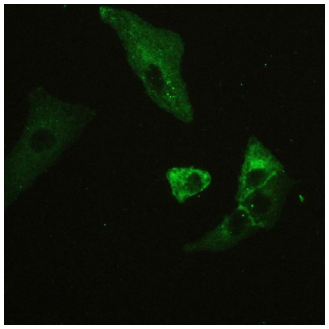

Figure 7. IF analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (A00248-1)
CD147/Emmprin was detected in immunocytochemical section of A549 cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/ml rabbit anti-CD147/Emmprin Antibody (A00248-1) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using DyLight®488 Conjugated Avidin (BA1128). Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Figure 8. IF analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (A00248-1)
CD147/Emmprin was detected in immunocytochemical section of A549 cell. Enzyme antigen retrieval was

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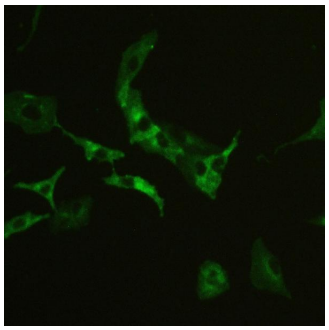

performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/ml rabbit anti-CD147/Emmprin Antibody (A00248-1) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using DyLight®488 Conjugated Avidin (BA1128). Visualize using a fluorescence microscope and filter sets appropriate for the label used.

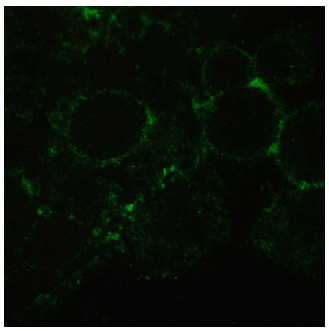

Figure 9. IF analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (A00248-1)
CD147/Emmprin was detected in immunocytochemical section of HELA cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/ml rabbit anti-CD147/Emmprin Antibody (A00248-1) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using DyLight®488 Conjugated Avidin (BA1128). Visualize using a fluorescence microscope and filter sets appropriate for the label used.

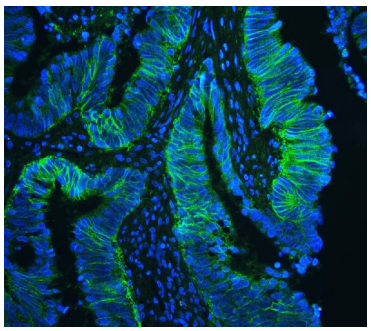

Figure 10. IF analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (A00248-1)
CD147/Emmprin was detected in paraffin-embedded section of human intestinal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/mL rabbit anti-CD147/Emmprin Antibody (A00248-1) 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.

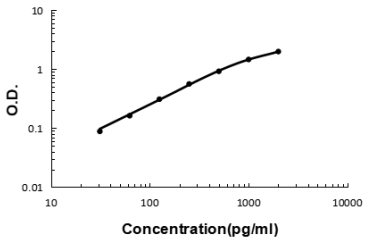

Figure 11. Sandwich ELISA - Recombinant human Emmprin protein standard curve.
Use in combination with reagents from Human Emmprin ELISA Kit EZ-Set (DIY Antibody Pairs) (EZ0751).

4 Publications Citing This Product

1. PubMed ID: 23123425, Ying Hz, Liu Yh, Yu B, Wang Zy, Zang Jn, Yu Ch. Food Chem Toxicol. 2013 Feb;52:53-60. Doi: 10.1016/J.Fct.2012.10.030. Epub 2012 Nov 2. Dietary Quercetin Ameliorates Nonalcoholic Steatohepatitis Induced By A High-Fat Diet In Gerbils.

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2. PubMed ID: 28927140, iTRAQ-coupled 2D LC/MS-MS analysis of CXCR7-transfected papillary thyroid carcinoma cells: A new insight into CXCR7 regulation of papillary thyroid carcinoma progression and identification of potential biomarkers

3. PubMed ID: 28962206, Overexpression of CD147 is associated with poor prognosis, tumor cell migration and ERK signaling pathway activation in hepatocellular carcinoma

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