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Anti-CD147/Emmprin Antibody Picoband™ (monoclonal, 3B13G7)

Catalog # ABO16250

Specification

Anti-CD147/Emmprin Antibody Picoband™ (monoclonal, 3B13G7) - Product Information

Application	**WB, IHC, IF**
Primary Accession	P35613
Host	**Mouse**
Isotype	**Mouse IgG1**
Reactivity	**Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-CD147/Emmprin Antibody Picoband™ (monoclonal, 3B13G7) . Tested in IF, IHC, WB applications. This antibody reacts with Human, Mouse.

Reconstitution
Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Anti-CD147/Emmprin Antibody Picoband™ (monoclonal, 3B13G7) - Additional Information

Gene ID 682

Other Names
Basigin, 5F7, Collagenase stimulatory factor, Extracellular matrix metalloproteinase inducer, EMMPRIN, Hepatoma-associated antigen, HAb18G, Leukocyte activation antigen M6, OK blood group antigen, Tumor cell-derived collagenase stimulatory factor, TCSF, CD147, BSG (HGNC:1116)

Calculated MW
35-60 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human
 Immunohistochemistry(Paraffin-embedded Section), 2-5 µg/ml, Human, Mouse
 Immunocytochemistry, 5 µg/ml, Human

Contents
Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.

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.

Purification
Immunogen affinity purified.

Storage	**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 freezing and thawing.

Anti-CD147/Emmprin Antibody Picoband™ (monoclonal, 3B13G7) - Protein Information

Name BSG (HGNC:1116)

Function
[Isoform 1]: Essential for normal retinal maturation and development (By similarity). Acts as a retinal cell surface receptor for NXNL1 and plays an important role in NXNL1-mediated survival of retinal cone photoreceptors (PubMed:25957687). In association with glucose transporter SLC16A1/GLUT1 and NXNL1, promotes retinal cone survival by enhancing aerobic glycolysis and accelerating the entry of glucose into photoreceptors (PubMed:25957687). May act as a potent stimulator of IL6 secretion in multiple cell lines that include monocytes (PubMed:21620857).

Cellular Location
Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV. [Isoform 2]: Cell membrane; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P26453}. Endosome Endoplasmic reticulum membrane; Single- pass type I membrane protein {ECO:0000250|UniProtKB:P26453} Basolateral cell membrane; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P26453} [Isoform 4]: Cell membrane; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P26453}

Tissue Location
[Isoform 1]: Retina-specific (PubMed:25957687). Expressed in retinal cone photoreceptors (at protein level) (PubMed:25957687). [Isoform 3]: Highly expressed in the bone marrow, fetal liver, lung, testis and thymus.

Anti-CD147/Emmprin Antibody Picoband™ (monoclonal, 3B13G7) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-CD147/Emmprin Antibody Picoband™ (monoclonal, 3B13G7) - Images

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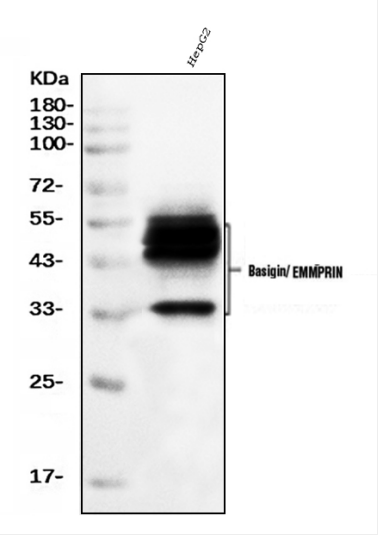

Figure 1. Western blot analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (M00248-4).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human 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 mouse anti-CD147/Emmprin antigen affinity purified monoclonal antibody (Catalog # M00248-4) 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-mouse 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 (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for CD147/Emmprin at approximately 35-60 kDa. The expected band size for CD147/Emmprin is at 42 kDa.

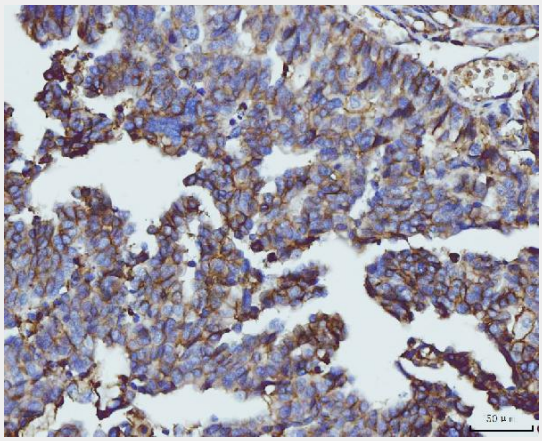

Figure 2. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (M00248-4).
CD147/Emmprin was detected in a paraffin-embedded section of human bladder epithelial carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-CD147/Emmprin Antibody (M00248-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

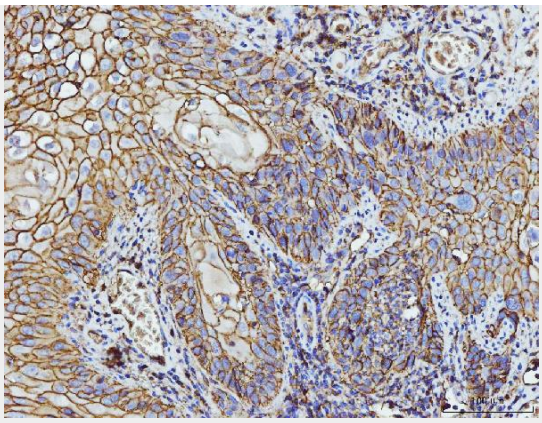

Figure 3. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (M00248-4). CD147/Emmprin was detected in a paraffin-embedded section of human laryngeal squamous cell carcinomas tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-CD147/Emmprin Antibody (M00248-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

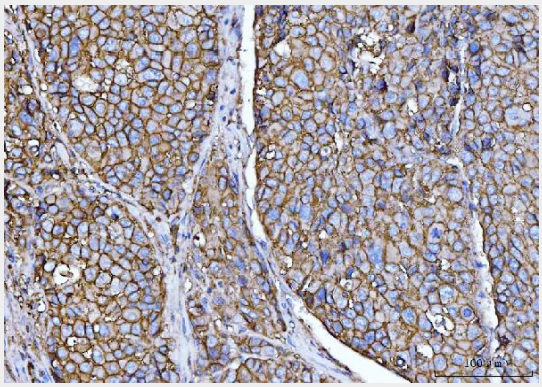

Figure 4. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (M00248-4). CD147/Emmprin was detected in a paraffin-embedded section of human ahepatocellular carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-CD147/Emmprin Antibody (M00248-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

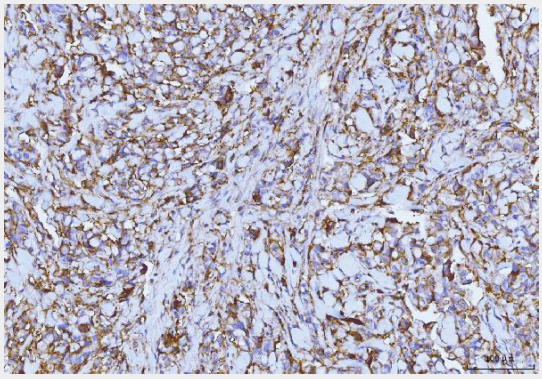

Figure 5. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (M00248-4).

CD147/Emmprin was detected in a paraffin-embedded section of human breast infiltrating ductal carcinoma 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 µg/ml mouse anti-CD147/Emmprin Antibody (M00248-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

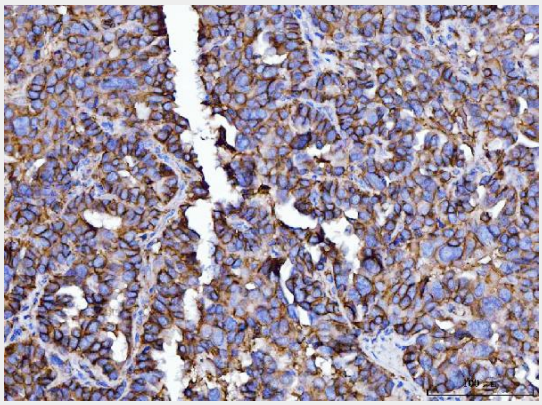

Figure 6. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (M00248-4). CD147/Emmprin was detected in a paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-CD147/Emmprin Antibody (M00248-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

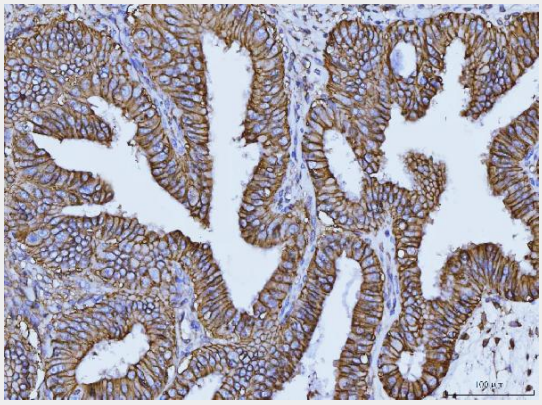

Figure 7. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (M00248-4). CD147/Emmprin was detected in a paraffin-embedded section of human endometrial cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-CD147/Emmprin Antibody (M00248-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

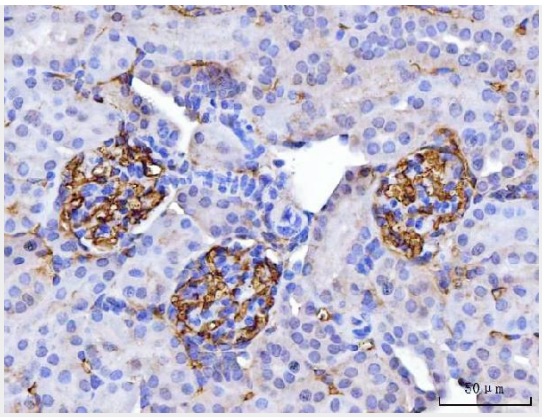

Figure 8. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (M00248-4). CD147/Emmprin was detected in a paraffin-embedded section of mouse kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-CD147/Emmprin Antibody (M00248-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

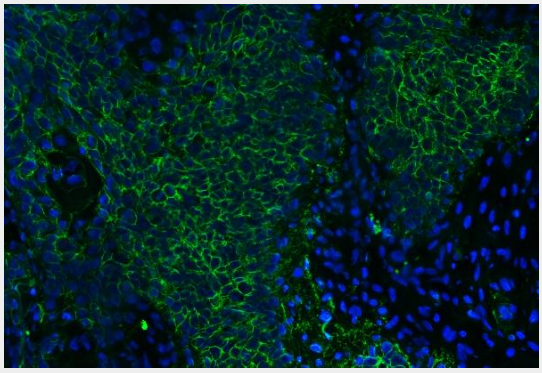

Figure 9. IF analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (M00248-4). CD147/Emmprin was detected in a paraffin-embedded section of human esophageal squamous carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 µg/mL mouse anti-CD147/Emmprin Antibody (M00248-4) overnight at 4°C. Biotin conjugated goat anti-mouse IgG (BA1001) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using DyLight®488 Conjugated Avidin (BA1128). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Anti-CD147/Emmprin Antibody Picoband™ (monoclonal, 3B13G7) - Background

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.