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Anti-CD147/Emmprin Picoband Antibody

Catalog # ABO10044

Product Information

Application	WB, IHC-P, IHC-F, FC, ICC, E
Primary Accession	P35613
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Basigin(BSG) detection. Tested with WB, IHC-P, IHC-F, ICC, FCM, ELISA in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	682
Other Names	Basigin, 5F7, Collagenase stimulatory factor, Extracellular matrix metalloproteinase inducer, EMMPRIN, Leukocyte activation antigen M6, OK blood group antigen, Tumor cell-derived collagenase stimulatory factor, TCSF, CD147, BSG
Calculated MW	42200
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, By Heat Immunohistochemistry(Frozen Section), 0.5-1 □g/ml Immunocytochemistry, 0.5-1 □g/ml Western blot, 0.1-0.5 □g/ml Flow Cytometry, 1-3 □¼g/1x10^6 cells ELISA, 0.1-0.5 □g/ml
Subcellular Localization	Cell membrane ; Single-pass type I membrane protein . Melanosome . Colocalizes with SLC16A1 and SLC16A8. Identified by mass spectrometry in melanosome fractions from stage I to stage IV. .
Tissue Specificity	Present only in vascular endothelium in non- neoplastic regions of the brain, whereas it is present in tumor cells but not in proliferating blood vessels in malignant gliomas.
Source	Eukaryota
Protein Name	Basigin

Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, 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	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.

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.

Images

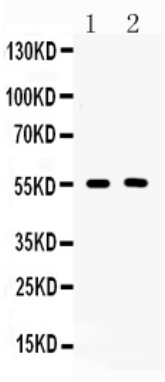


Figure 1. Western blot analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (ABO10044). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human placenta tissue lysates,Lane 2: JURKAT whole cell 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-CD147/Emmprin antigen affinity purified polyclonal antibody (Catalog # ABO10044) at 0.5 □¼g/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 CD147/Emmprin at approximately 55KD. The expected band size for CD147/Emmprin is at 42KD.

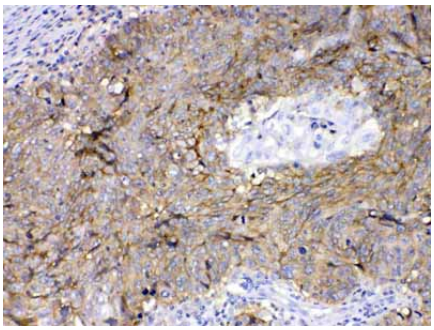


Figure 2. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (ABO10044).CD147/Emmprin was detected in paraffin-embedded section of human lung cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-CD147/Emmprin Antibody (ABO10044) 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) with DAB as the chromogen.

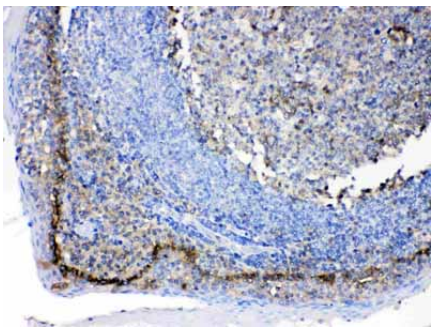
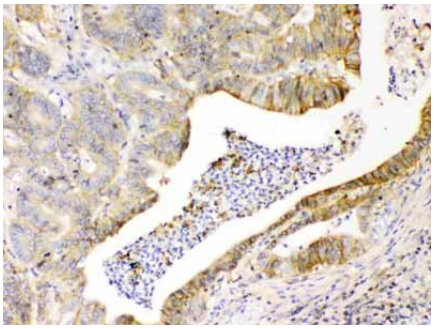


Figure 3. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (ABO10044).CD147/Emmprin was detected in paraffin-embedded section of human tonsil tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-CD147/Emmprin Antibody (ABO10044) 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) with DAB as the chromogen.

Figure 4. IHC analysis of CD147/Emmprin using anti-CD147/Emmprin antibody (ABO10044).CD147/Emmprin was detected in paraffin-embedded section of human intetsinal 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 □¼g/ml rabbit anti-CD147/Emmprin Antibody (ABO10044) 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) with DAB as the chromogen.

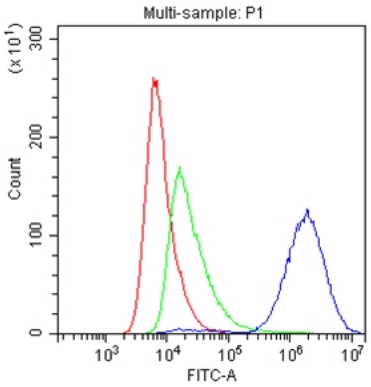


Figure 5. Flow Cytometry analysis of A549 cells using anti-CD147/Emmprin antibody (ABO10044).Overlay histogram showing A549 cells stained with ABO10044 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CD147/Emmprin Antibody (ABO10044,1 □¼g/1x106 cells) for 30 min at 20 □°C. DyLight?488 conjugated goat anti-rabbit IgG (BA1127, 5-10 □¼g/1x106 cells) was used as secondary antibody for 30 minutes at 20 □°C. Isotype control antibody (Green line) was rabbit IgG (1 □¼g/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

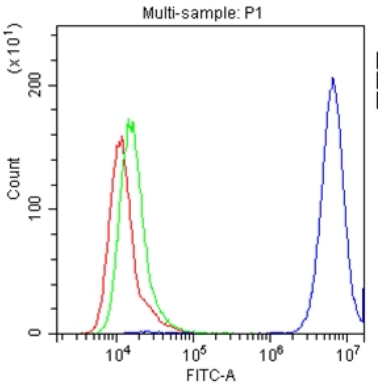


Figure 6. Flow Cytometry analysis of Hela cells using anti-CD147/Emmprin antibody (ABO10044).Overlay histogram showing Hela cells stained with ABO10044 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CD147/Emmprin Antibody (ABO10044,1 □¼g/1x106 cells) for 30 min at 20 □°C. DyLight?488 conjugated goat anti-rabbit IgG (BA1127, 5-10 □¼g/1x106 cells) was used as secondary antibody for 30 minutes at 20 □°C. Isotype control antibody (Green line) was rabbit IgG (1 □¼g/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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