abcam

ab247649

Anti-CD97 antibody [EPR4427] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR4427
Purification technique	Affinity purification Protein A
Specificity	Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.
Concentration	1.03 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	-
Notes	Antigen retrieval is recommended.

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information ADGRE5

Function	Receptor potentially involved in both adhesion and signaling processes early after leukocyte activation. Plays an essential role in leukocyte migration.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab247649 is the carrier-free version of ab108368.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD97 also known as adhesion G protein-coupled receptor E5 is a member of the EGF-TM7 subfamily of adhesion GPCRs. The protein has a mass of approximately 83-93 kDa and consists of distinct extracellular transmembrane and cytoplasmic domains. CD97 expresses highly on cells of the immune system especially granulocytes activated T-lymphocytes and smooth muscle cells. Researchers frequently link CD97 expression to immune cell activation and migration processes.
Biological function summary	CD97 plays a significant role in cell communication and adhesion. The protein is part of a multiprotein complex and interacts with chondroitin sulfate and other heparan sulfate proteoglycans. This interaction modulates inflammatory responses and tissue remodeling. CD97 influences immune responses by mediating cellular interaction and signaling through its long extracellular domain. Its activity is essential for leukocyte trafficking and extravasation.
Pathways	CD97 participates in important cell adhesion and immune system pathways. It interacts notably with the EGF-like crossover domains and the GPCR pathways. Related proteins such as CD55 also known as decay-accelerating factor interact with CD97 influencing the immune regulatory processes. These interactions enhance our understanding of leukocyte recruitment and the maintenance of tissue architecture during inflammatory responses.
Associated diseases and disorders	CD97 is associated with autoimmune diseases and cancer. High CD97 expression levels relate to diseases like rheumatoid arthritis and certain types of tumors including gastric carcinoma. In cancer CD97 interacts with integrin molecules promoting metastasis and tumor invasion. Understanding CD97's connection to integrins and other components could provide insights into therapeutic targets for autoimmune and cancer treatment.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

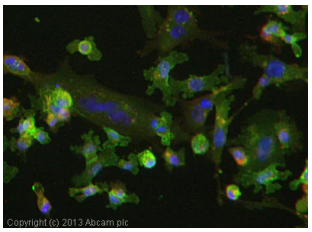
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

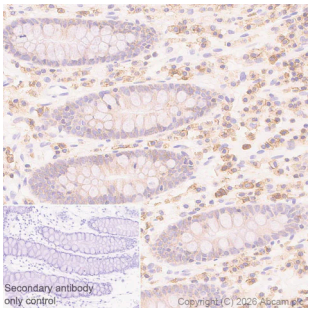
7 product images



Immunocytochemistry/ Immunofluorescence - Anti-CD97 antibody [EPR4427] - BSA and Azide free (ab247649)

CD97 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD97 antibody

This data was developed using ab108368, the same antibody clone in a different buffer formulation.
ICC/IF image of ab108368 stained MDA-MB-231 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab108368 at 1/200 dilution overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti- rabbit (ab96899) IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD97 antibody [EPR4427] - BSA and Azide free (ab247649)

CD97 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human colon using rabbit Anti-CD97 antibody

This data was developed using ab108368, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling CD97 with ab108368 at 1/200 dilution.

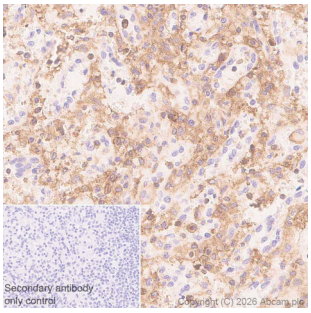
Positive staining on human colon

The primary antibody was incubated for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD97 antibody [EPR4427] - BSA and Azide free (ab247649)

CD97 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human spleen using rabbit Anti-CD97 antibody

This data was developed using ab108368, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human spleen tissue labeling CD97 with ab108368 at 1/2000 dilution.

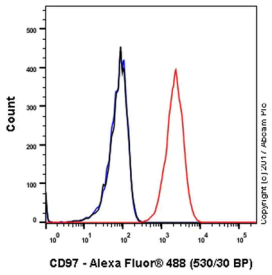
Positive staining on human spleen

The primary antibody was incubated for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

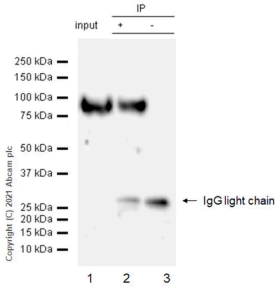
Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Flow Cytometry - Anti-CD97 antibody [EPR4427] - BSA and Azide free (ab247649)

CD97 Flow Cytometry staining using rabbit Anti-CD97 antibody

This data was developed using ab108368, the same antibody clone in a different buffer formulation.
Flow Cytometry analysis of MDA-MB-231 (human mammary gland epithelial adenocarcinoma) cells labeling CD97 with purified ab108368 at 1/250 dilution (10ug/ml) (red). A Goat anti rabbit IgG (Alexa Fluor® 488)(1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Immunoprecipitation - Anti-CD97 antibody [EPR4427] - BSA and Azide free (ab247649)

This data was developed using ab108368, the same antibody clone in a different buffer formulation.
CD97 was immunoprecipitated from 0.35 mg U-937 (Human histiocytic lymphoma monocyte) whole cell lysate 10 µg with ab108368 at 1/50 dilution (2µg). VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.

Lane 1: U-937 (Human histiocytic lymphoma monocyte) whole cell lysate 10 µg

Lane 2: ab108368 IP in U-937 whole cell lysate

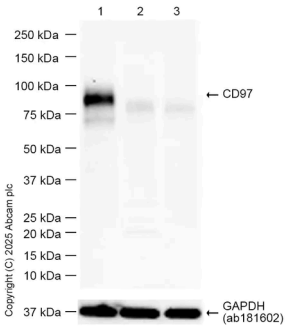
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab108368 in U-937 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-CD97 antibody [EPR4427] (ab108368)

Predicted band size: 92 kDa

Observed band size: 74-89 kDa



Western blot - Anti-CD97 antibody [EPR4427] - BSA and Azide free (ab247649)

CD97 Western blot staining using rabbit Anti-CD97 antibody

This data was developed using ab108368, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/1000000 dilution.

Negative sample: HT-1080, HEK-293 (PMID:30728423, PMID:34028660)

All lanes:
Western blot - Anti-CD97 antibody [EPR4427] (ab108368) at 1/1000 dilution

Lane 1:
U-937 (human histiocytic lymphoma monocyte) whole cell lysate at 20 µg

Lane 2:
HT-1080 (human fibrosarcoma epithelial cell) whole cell lysate at 20 µg

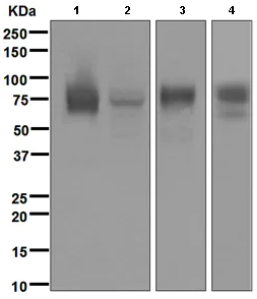
Lane 3:
HEK-293 (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 92 kDa

Exposure time: 40s



Western blot - Anti-CD97 antibody [EPR4427] - BSA and Azide free (ab247649)

This data was developed using ab108368, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-CD97 antibody [EPR4427] (ab108368) at 1/1000 dilution

Lane 1:
Human tonsil tissue lysate at 10 µg

Lane 2:
Jurkat cell lysate at 10 µg

Lane 3:
U937 (Human histiocytic lymphoma cell line) cell lysate at 10 µg

Lane 4:
Human fetal thymus tissue lysate at 10 µg

Predicted band size: 92 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.