abcam

ab324158

Alexa Fluor® 488 Anti-CD13 antibody [EPR27472-288]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR27472-288
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Target data

See full target information Anpep

Function Broad specificity aminopeptidase which plays a role in the final digestion of peptides generated from hydrolysis of proteins by gastric and pancreatic proteases. Also involved in the processing of various peptides including peptide hormones, such as angiotensin III and IV, neuropeptides, and chemokines (By similarity). May also be involved the cleavage of peptides bound to major histocompatibility complex class II molecules of antigen presenting cells (PubMed:8691132). May have a role in angiogenesis and promote cholesterol crystallization (By similarity). May have a role in amino acid transport by acting as binding partner of amino acid transporter SLC6A19 and regulating its activity (PubMed:22677001).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

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.

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Supplementary info

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

Activity summary	CD13 also known as aminopeptidase N (ANPEP) is a transmembrane protein with a molecular weight of approximately 150 kDa. It functions as a zinc-dependent metalloenzyme which cleaves N-terminal amino acids from peptides and proteins. CD13 protein is expressed on various cell types including myeloid cells epithelial cells endothelial cells and fibroblasts. Its presence is significantly observed in the brush border of the small intestinal mucosa and the renal proximal tubule. Researchers can study CD13 using anti-CD13 antibodies and CD13 ELISA kits.
Biological function summary	CD13 regulates peptide-mediated signaling and controls the maturation and catabolism of bioactive peptides. The enzymatic function of CD13 influences processes such as cell proliferation motility and angiogenesis. It does not operate as part of a larger complex but its activity modulates several cellular and systemic functions. CD13's role in these biological processes highlights its importance in modulating local and systemic peptide pools which contributes to its diverse physiological effects.
Pathways	CD13 plays significant roles in the renin-angiotensin system and the regulation of inflammatory responses. In the renin-angiotensin system CD13 modulates the

	activity of angiotensin influencing blood pressure and fluid balance. Through its enzymatic activity CD13 interacts with proteins such as ACE another critical player in this pathway. In inflammation CD13 regulates the availability of chemotactic peptides affecting leukocyte migration and adhesion. The proteins it works with in inflammatory pathways include cytokines which CD13 indirectly modulates by altering chemokine activity.
Associated diseases and disorders	Aberrant CD13 expression and activity are implicated in cancer and inflammatory diseases. In cancer overexpression of CD13 correlates with tumor growth and metastasis particularly in cancers like renal cell carcinoma and prostate cancer. It can confer an increased malignant phenotype by promoting angiogenesis and immune evasion. In inflammatory disorders dysregulation of CD13 exacerbates diseases such as rheumatoid arthritis through its impact on peptide-mediated signaling and immune cell movement. Its connection with inflammatory cytokines like IL-8 indicates its important role in mediating inflammatory responses.

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

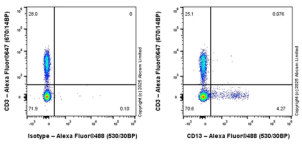
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images

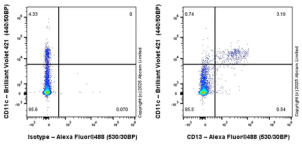


Flow Cytometry - Alexa Fluor® 488 Anti-CD13 antibody [EPR27472-288] (ab324158)

CD13 Flow Cytometry staining of Mouse spleen cell using rabbit Anti-CD13 antibody

Flow cytometric analysis of Mouse spleen cell cells labelling CD13 with ab324158 at 1/50 dilution (1ug) / Right compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 488) (ab199091) / Left isotype control.

Cells were co-stained with anti-CD3 conjugated to Alexa Fluor®647.
Gated on viable cells.

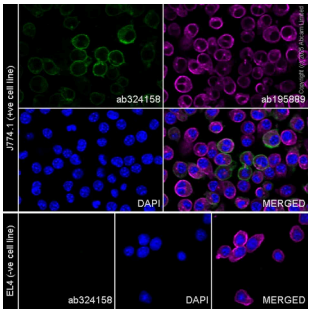


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CD13 Flow Cytometry staining of Mouse spleen cell using rabbit Anti-CD13 antibody

Flow cytometric analysis of Mouse spleen cell cells labelling CD13 with ab324158 at 1/50 dilution (1ug) / Right compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 488) (ab199091) / Left isotype control.

Cells were co-stained with anti-CD11c conjugated to Brilliant Violet 421.
Gated on viable cells.



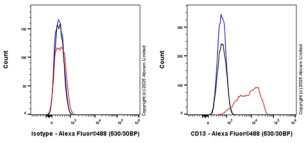
Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-CD13 antibody [EPR27472-288] (ab324158)

CD13 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD13 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized J774A.1 (mouse reticulum cell sarcoma monocyte/macrophage) cells labelling CD13 with ab324158 at 1/50 (44.36 ug/ml) dilution (Green).

Confocal image showing membranous staining in J774A.1 cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labeled with DAPI (shown in blue). Negative control: EL4 (PMID: 8103749).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5ug/ml) dilution (Magenta).



Flow Cytometry - Alexa Fluor® 488 Anti-CD13 antibody [EPR27472-288] (ab324158)

CD13 Flow Cytometry staining using rabbit Anti-CD13 antibody

Flow cytometric analysis of EL4 (mouse lymphoma T lymphocyte, Left) / J774A.1 (mouse reticulum cell sarcoma monocyte/macrophage, Right) cells labelling CD13 with ab324158 at 1/50 dilution (1ug) (Red) compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 488) (ab199091) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Gated on viable cells.
Negative control: EL4 (PMID: 8103749).

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