abcam

ab69775

PE Anti-CD13 antibody [WM15]

Anti-CD13 antibody [WM15] conjugated to PE - suitable for flow cytometry, and reacts with human samples. Clone [WM15] is a mouse monoclonal antibody and one of the most commonly used clones for flow cytometry.

Design your panel with our interactive flow cytometry panel builder. Click here.

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing ANPEP protein. The exact immunogen used to generate this antibody is proprietary information. Database link P15144
Clone number	WM15
Purification technique	Size-exclusion chromatography

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-

Notes	Use 20µl for 10^6 cells or 100 ul of whole blood. ab91357 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Predicted

Species	Primates
Dilution info	-
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. May also be involved the cleavage of peptides bound to major histocompatibility complex class II molecules of antigen presenting cells. May have a role in angiogenesis and promote cholesterol crystallization. May have a role in amino acid transport by acting as binding partner of amino acid transporter SLC6A19 and regulating its activity (By similarity). (Microbial infection) Acts as a receptor for human coronavirus 229E/HCoV-229E. In case of human coronavirus 229E (HCoV-229E) infection, serves as receptor for HCoV-229E spike glycoprotein. (Microbial infection) Mediates as well Human cytomegalovirus (HCMV) infection.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions.

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

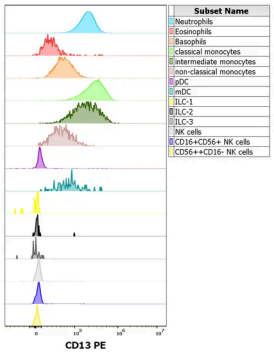
We do not recommend this combination. It is not covered by our product promise.

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.

3 product images

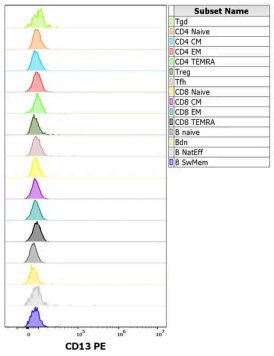


Flow Cytometry - PE Anti-CD13 antibody [WM15] (ab69775)

CD13 Flow Cytometry staining of Suspension of blood leukocytes isolated from buffy coats using mouse Anti-CD13 antibody

Expression profiling on peripheral blood subsets using Anti-human CD13 PE antibody (clone WM15). Innate panel

HCDM CDMaps standardized procedures (Kuzilkova D et al. Front Immunol. 2022;13:827898) were used for cell isolation and surface staining of blood leukocytes, with the modification of staining protocol using cytometry test tubes.
Suspension of blood leukocytes isolated from buffy coats (2 x 10^6 cells) was added to the mixture of anti-human CD13 PE antibody (clone WM15, 2.5 µg/ml in stained blood sample) and Monocyte Blocking Buffer, vortexed and incubated for 20 min. Next, optimized backbone antibody panel (HLDA Innate) was added to test tubes, vortexed and incubated for 20 min. The residual erythrocytes were lysed with 2 ml of 10× diluted EXCELLYSE Easy solution and incubated for 10 min. Finally, samples were centrifuged (670 g, 5 min.), supernatant removed and the cell pellet was resuspended in 200 µl of PBS for acquisition.

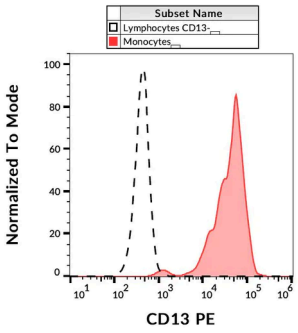


Flow Cytometry - PE Anti-CD13 antibody [WM15] (ab69775)

CD13 Flow Cytometry staining of Suspension of blood leukocytes isolated from buffy coats using mouse Anti-CD13 antibody

Expression profiling on peripheral blood subsets using Anti-human CD13 PE antibody (clone WM15). Adaptive panel

HCDM CDMaps standardized procedures (Kuzilkova D et al. Front Immunol. 2022;13:827898) were used for cell isolation and surface staining of blood leukocytes, with the modification of staining protocol using cytometry test tubes.
Suspension of blood leukocytes isolated from buffy coats (2 x 10^6 cells) was added to the mixture of anti-human CD13 PE antibody (clone WM15, 2.5 µg/ml in stained blood sample) and Monocyte Blocking Buffer, vortexed and incubated for 20 min. Next, optimized backbone antibody panel (HLDA Adaptive) was added to test tubes, vortexed and incubated for 20 min. The residual erythrocytes were lysed with 2 ml of 10× diluted EXCELLYSE Easy solution and incubated for 10 min. Finally, samples were centrifuged (670 g, 5 min.), supernatant removed and the cell pellet was resuspended in 200 µl of PBS for acquisition.



Flow Cytometry - PE Anti-CD13 antibody [WM15] (ab69775)

CD13 Flow Cytometry staining of Human peripheral blood using mouse Anti-CD13 antibody

Flow cytometry analysis (surface staining) of human peripheral blood leukocytes using ab69775.

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