abcam

ab77230

APC Anti-CD177 antibody [MEM-166]

Anti-CD177 antibody [MEM-166] conjugated to APC - suitable for flow cytometry, and reacts with human samples. Clone [MEM-166] is a mouse monoclonal antibody cited in 16 publications.

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Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	APC
Excitation/Emission	Ex: 650nm, Em: 660nm
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing CD177 protein. The exact immunogen used to generate this antibody is proprietary information. Database link Q8N6Q3
Clone number	MEM-166
Purification technique	Size-exclusion chromatography
Purification notes	The conjugate is purified by size-exclusion chromatography and adjusted for direct use.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	10 µL for 10^6 Cells
Notes	ab37391 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. Use 10 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension.

Predicted

Species	Primates
Dilution info	-
Notes	-

Target data

See full target information CD177

Function

In association with beta-2 integrin heterodimer ITGAM/CD11b and ITGB2/CD18, mediates activation of TNF primed neutrophils including degranulation and superoxide production (PubMed:21193407). In addition, by preventing beta-2 integrin internalization and attenuating chemokine signaling favors adhesion over migration (PubMed:28807980). Heterophilic interaction with PECAM1 on endothelial cells plays a role in neutrophil transendothelial migration in vitro (PubMed:17580308). However, appears to be dispensable for neutrophil recruitment caused by bacterial infection in vivo (PubMed:23461681). Acts as a receptor for the mature form of protease PRTN3 allowing its display at the cell surface of neutrophils (PubMed:17244676, PubMed:18462208). By displaying PRTN3 at the neutrophil cell surface, may play a role in enhancing endothelial cell junctional integrity and thus vascular integrity during neutrophil diapedesis (PubMed:23202369).

Storage

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

Notes

Purified antibody is conjugated with cross-linked Allophycocyanin (APC) under optimum conditions.

Supplementary info

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

Activity summary	CD177 also known as neutrophil antigen NB1 is a glycoprotein with an approximate mass of 58 kDa. It is primarily expressed on the surface of neutrophils a type of white blood cell involved in immune response. The expression of CD177 can vary among individuals where some people might have a higher or lower presence on their neutrophils. CD177 has been identified to play a role in cell adhesion and signaling functions contributing to various cellular processes within the immune system.
Biological function summary	CD177 functions by mediating interactions between neutrophils and endothelial cells during inflammation. This protein is not known to be part of a multi-protein complex but it plays a significant role in facilitating neutrophil transmigration from blood vessels to sites of tissue damage or infection. This process supports the body's defense mechanisms by enabling neutrophils to quickly respond to external threats and participate in the inflammatory response.
Pathways	The involvement of CD177 in chemotactic activity and cell migration highlights its contribution to both the immune response and inflammation pathways. Its interaction with proteins such as PECAM-1 (Platelet Endothelial Cell Adhesion Molecule-1) enhances neutrophil transmigration across the endothelium. CD177 acts within these pathways to ensure a precise and rapid movement of neutrophils which is essential for an effective immune response.
Associated diseases and disorders	CD177 levels have associations with conditions like polycythemia vera and anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis. In polycythemia vera CD177 can affect the proliferation of blood cells due to its role in neutrophil function. In ANCA-associated vasculitis CD177's interaction with proteins such as PR3 (Proteinase 3) on the surface of neutrophils could contribute to the pathophysiology of the disease leading to inappropriate activation of the immune system and subsequent tissue damage.

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

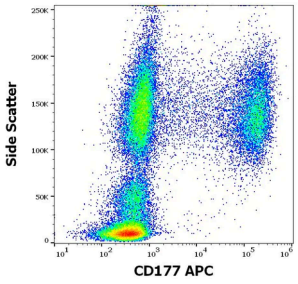
We do not recommend this combination. It is not covered by our product promise.

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.

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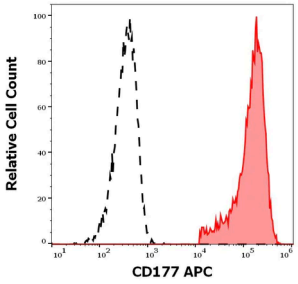
2 product images



Flow Cytometry - APC Anti-CD177 antibody [MEM-166] (ab77230)

CD177 Flow Cytometry staining of Human peripheral blood using mouse Anti-CD177 antibody

Flow cytometry surface staining pattern of human peripheral whole blood stained using ab77230 (concentration in sample 0.56 µg/ml).



Flow Cytometry - APC Anti-CD177 antibody [MEM-166] (ab77230)

CD177 Flow Cytometry staining of Human peripheral blood using mouse Anti-CD177 antibody

Separation of human CD117 positive neutrophil granulocytes (red-filled) from lymphocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using ab77230 (concentration in sample 0.56 µg/ml).

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