CD151 antibodies, mouse

For research use only

9 µg equal 60 tests, 30 µg equal 200 tests. One test corresponds to labeling of 10^6 cells.

Product	Content	Order no.
CD151-VioBright FITC	9 µg in 300 µL	130-109-064
CD151-VioBright FITC	30 µg in 1 mL	130-109-009
CD151-PE	9 µg in 300 µL	130-109-060
CD151-PE	30 µg in 1 mL	130-109-005
CD151-APC	9 µg in 300 µL	130-109-061
CD151-APC	30 µg in 1 mL	130-109-006
CD151-APC-Vio770	9 µg in 300 µL	130-109-063
CD151-APC-Vio770	30 µg in 1 mL	130-109-008
CD151-Biotin	9 µg in 300 µL	130-109-059
CD151-Biotin	30 µg in 1 mL	130-109-004

Warnings

Reagents contain sodium azide. Under acidic conditions sodium azide yields hydrazoic acid, which is extremely toxic. Azide compounds should be diluted with running water before discarding. These precautions are recommended to avoid deposits in plumbing where explosive conditions may develop.

Technical data and background information

Antigen	CD151
Clone	REA561
Isotype	recombinant human IgG1
Isotype control	REA Control antibodies
Alternative names of antigen	PETA-3, SFA-1, TSPAN24
Molecular mass of antigen [kDa]	28
Distribution of antigen	endothelial cells, epithelial cells, megakaryocytes, platelets
Product format	Reagents are supplied in buffer containing stabilizer and 0.05% sodium azide.
Fixation	Cells should be stained prior to fixation, if formaldehyde is used as a fixative.
Storage	Store protected from light at 2–8 °C. Do not freeze.

Clone REA561 recognizes the mouse CD151 antigen, a cell surface glycoprotein which is a member of the transmembrane 4 superfamily, also known as the tetraspanin family. CD151 complexes with integrins and other transmembrane 4 superfamily members and mediates signal transduction events that play a role in the regulation of cell development, activation, growth, and motility. CD151 is expressed on endothelial and epithelial cells, megakaryocytes, and platelets.

Additional information: Clone REA561 displays negligible binding to Fc receptors.

Reagent requirements

- Buffer: Prepare a solution containing phosphate-buffered saline (PBS), pH 7.2, 0.5% bovine serum albumin (BSA), and 2 mM EDTA by diluting MACS® BSA Stock Solution (# 130-091-376) 1:20 with autoMACS® Rinsing Solution (# 130-091-222). Keep buffer cold (2−8 °C).
  Note: EDTA can be replaced by other supplements such as anticoagulant citrate dextrose formula-A (ACD-A) or citrate phosphate dextrose (CPD). Buffers or media containing Ca^{2+} or Mg^{2+} are not recommended for use.
- (Optional) Fluorochrome-conjugated anti-biotin antibodies, e.g., Anti-Biotin-PE (# 130-090-756) as secondary antibody reagent in combination with biotinylated antibodies.
- (Optional) Propidium Iodide Solution (# 130-093-233) for flow cytometric exclusion of dead cells without fixation.
- (Optional) Fixation and Dead Cell Discrimination Kit (# 130-091-163) for cell fixation and flow cytometric exclusion of dead cells.

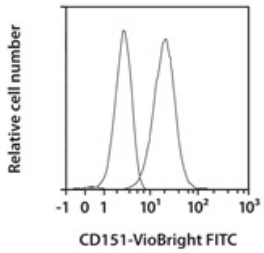
Protocol for cell surface staining

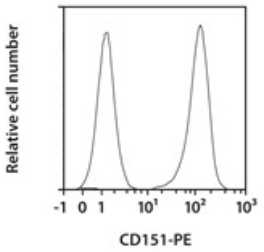
- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:10 for up to 10^6 cells/50 µL of buffer.
- Volumes given below are for up to 10^6 nucleated cells. When working with fewer than 10^6 cells, use the same volumes as indicated. When working with higher cell numbers, scale up all reagent volumes and total volumes accordingly (e.g. for 2×10^6 nucleated cells, use twice the volume of all indicated reagent volumes and total volumes).

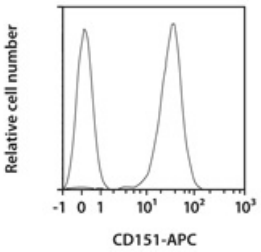
1. Determine cell number.
2. Centrifuge cell suspension at 300×g for 10 minutes. Aspirate supernatant completely.
3. Resuspend up to 10^6 nucleated cells per 45 µL of buffer.
4. Add 5 µL of the antibody.
5. Mix well and incubate for 10 minutes in the dark in the refrigerator (2−8 °C).
   Note: Higher temperatures and/or longer incubation times may lead to non-specific cell labeling. Working on ice requires increased incubation times.
6. Wash cells by adding 1−2 mL of buffer and centrifuge at 300×g for 10 minutes. Aspirate supernatant completely.
7. (Optional) If biotinylated antibody was used, resuspend the cell pellet in 100 µL of buffer, add 10 µL of fluorochrome-conjugated anti-biotin antibody, and continue as described in steps 5 and 6.
8. Resuspend cell pellet in a suitable amount of buffer for analysis by flow cytometry or fluorescence microscopy.

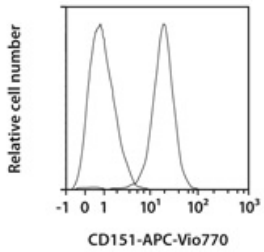
Examples of immunofluorescent staining

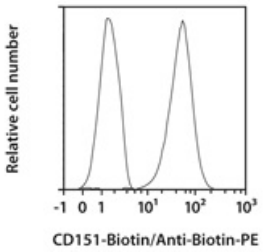
Mouse bEnd.3 cells were stained with CD151 antibodies or with the corresponding REA Control antibodies (left peak) and analyzed by flow cytometry using the MACSQuant® Analyzer. Cell debris and dead cells were excluded from the analysis based on scatter signals and propidium iodide fluorescence.











References

1. **Hasegawa, H. *et al.*** (1997) Molecular cloning and expression of mouse homologue of SFA-1/PETA-3 (CD151), a member of the transmembrane 4 superfamily. Biochim. Biophys. Acta 1353(2): 125–130.
2. **Fitter, S. *et al.*** (1998) Characterisation of the mouse homologue of CD151 (PETA-3/SFA-1); genomic structure, chromosomal localisation and identification of 2 novel splice forms. Biochim. Biophys. Acta 1398(1): 75–85.
3. **Lotus, M. T. *et al.*** (2000) The tetraspan molecule CD151, a novel constituent of hemidesmosomes, associates with the integrin α6β4 and may regulate the spatial organization of hemidesmosomes. J. Cell Biol. 149(4): 969–982.

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