CD87 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.
CD87-VioBright FITC	9 µg in 300 µL	130-109-899
CD87-VioBright FITC	30 µg in 1 mL	130-109-857
CD87-PE	9 µg in 300 µL	130-109-897
CD87-PE	30 µg in 1 mL	130-109-855
CD87-APC	9 µg in 300 µL	130-109-898
CD87-APC	30 µg in 1 mL	130-109-856
CD87-Biotin	9 µg in 300 µL	130-109-896
CD87-Biotin	30 µg in 1 mL	130-109-854

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	CD87
Clone	REA630
Isotype	recombinant human IgG1
Isotype control	REA Control antibodies
Alternative names of antigen	U-PAR, uPAR
Molecular mass of antigen [kDa]	30
Distribution of antigen	endothelial cells
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 REA630 recognizes the mouse CD87 antigen, a key molecule involved in invasive migration of angiogenic endothelium, also known as uPAR. CD87 binds uPA (urokinase plasminogen activator) and thus facilitates the catalytic C domain of the uPA to come in close proximity of membranebound plasminogen. uPA is a serine protease, which converts plasminogen into plasmin which in turn is involved in digestion of various extracellular matrix proteins. CD87 belongs to the Ly6/neurotoxin receptor family and consists of three disulfide-bonded homologous domains, D1, D2, and D3. Function of uPAR is modulated by two inhibitors, PA1 and PA2. CD87 is expressed in angiogenic endothelial

cells.
Additional information: Clone REA630 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.

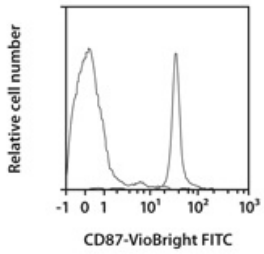
Protocol for cell surface staining

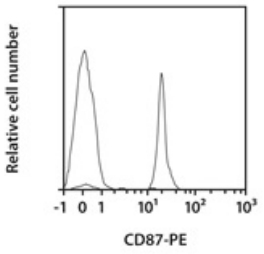
- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:10 for up to 10^6 cells/50 µL of buffer.
- Volumes given below are for up to 10^6 nucleated cells. When working with fewer than 10^6 cells, use the same volumes as indicated. When working with higher 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).

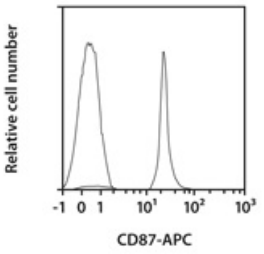
1. Determine cell number.
2. Centrifuge cell suspension at 300×g for 10 minutes. Aspirate supernatant completely.
3. Resuspend up to 10^6 nucleated cells per 45 µL of buffer.
4. Add 5 µL of the antibody.
5. Mix well and incubate for 10 minutes in the dark in the refrigerator (2−8 °C).
   Note: Higher 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.

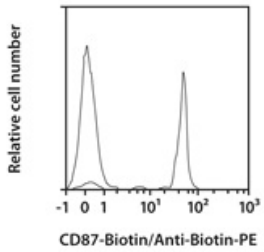
Examples of immunofluorescent staining

Latex beads were coated with recombinant mouse CD87 protein and then stained with CD87 antibodies or with the corresponding REA Control antibodies (left peak). Flow cytometry was performed using the MACSQuant® Analyzer.









References

1. **Suh, T. T. *et al.*** (1994) The murine urokinase-type plasminogen activator receptor gene. J. Biol. Chem. 269(42): 25992–25998.
2. **Miljkovic-Licina, M. *et al.*** (2009) Sushi repeat protein X-linked 2, a novel mediator of angiogenesis. FASEB J. 23(12): 4105–4116.
3. **Lin, L. *et al.*** (2010) Structure-based engineering of species selectivity in the interaction between urokinase and its receptor: implication for preclinical cancer therapy. J. Biol. Chem. 285(14): 10982–10992.

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