CD24 antibodies, human

For research use only

One test corresponds to labeling of up to 10^7 cells in a total volume of 100 µL.

Product	Content	Order no.
CD24-FITC	for 30 tests	130-099-118
CD24-FITC	for 100 tests	130-095-952
CD24-PE	for 30 tests	130-098-861
CD24-PE	for 100 tests	130-095-953
CD24-APC	for 30 tests	130-099-399
CD24-APC	for 100 tests	130-095-954
CD24-VioBlue	for 30 tests	130-099-150
CD24-VioBlue	for 100 tests	130-099-148
CD24-PE-Vio770	for 30 tests	130-108-381
CD24-PE-Vio770	for 100 tests	130-108-352
CD24-APC-Vio770	for 30 tests	130-099-935
CD24-APC-Vio770	for 100 tests	130-099-937
CD24-PerCP-Vio700	for 30 tests	130-101-258
CD24-PerCP-Vio700	for 100 tests	130-097-914
CD24-Biotin	for 30 tests	130-098-903
CD24-Biotin	for 100 tests	130-098-902

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	CD24
Clone	32D12
Isotype	mouse IgG1κ
Isotype control	Mouse IgG1 – isotype control antibodies
Alternative names of antigen	CD24A, BA-1, HAS
Molecular mass of antigen [kDa]	3
Distribution of antigen	B cells, breast, cancer stem cells, endothelial cells, epithelial cells, granulocytes, Langerhans cells, leukemia cells, lung, monocytes, ovary, pancreas, ES and iPS cells, red blood cells, thymocytes
Product format	Antibodies are supplied in buffer containing stabilizer and 0.05% sodium azide.

Fixation	The antibody is suited for staining of formaldehyde-fixed cells.
Storage	Store protected from light at 2–8 °C. Do not freeze.

The human CD24 antigen is also known as heat-stable antigen (HSA). CD24 has been identified to be a negative marker for breast cancer stem cells[1] and a positive marker for ovarian[2] or pancreatic cancer stem cells[3]. The CD24 antibody can be used, for example, to differentiate $CD44^+CD24^-$ breast cancer stem cells from $CD24^+$ expressing cells from a primary tumor sample.

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) FcR Blocking Reagent, human (# 130-059-901) to avoid Fc receptor–mediated antibody labeling.
- (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.

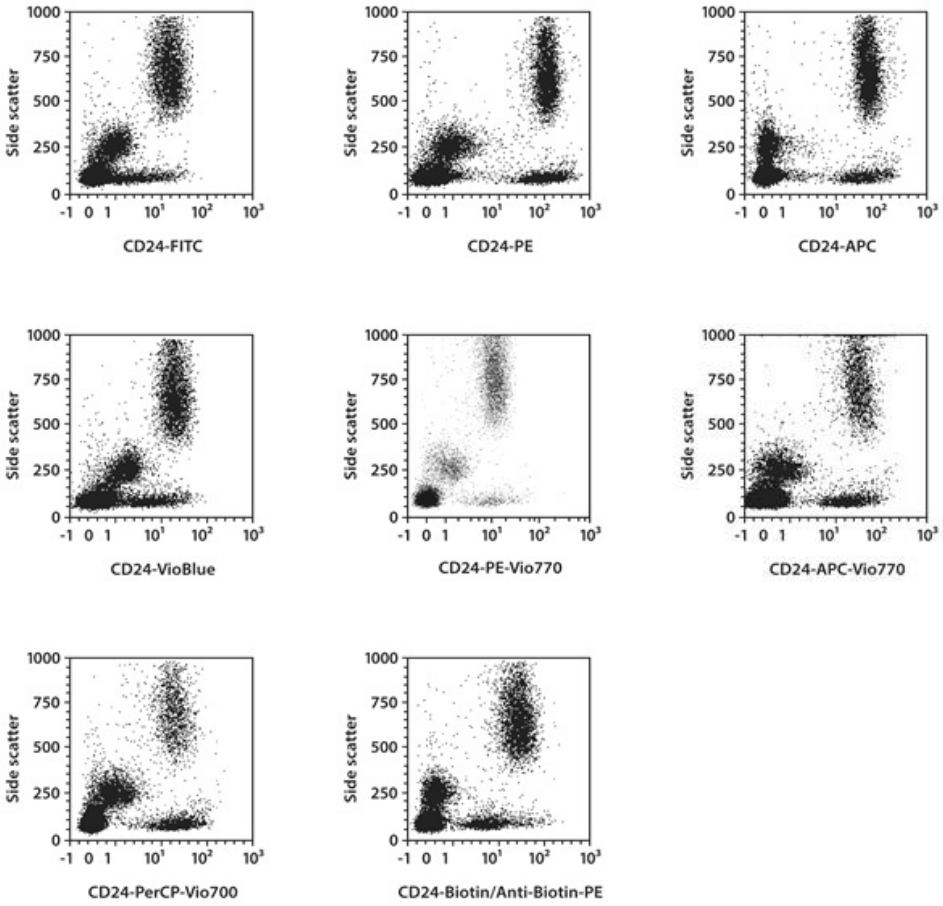
Protocol for cell surface staining

- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:11 for up to 10^7 cells/100 µL of buffer.
- Volumes given below are for up to 10^7 nucleated cells. When working with fewer than 10^7 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 2×10^7 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 10^7 nucleated cells per 100 µL of buffer.
4. Add 10 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

White blood cells (WBCs) were stained with CD24 antibodies and analyzed by flow cytometry. Cell debris and dead cells were excluded from the analysis based on scatter signals and propidium iodide fluorescence or 4',6-diamidino-2-phenylindole (DAPI) fluorescence, as in the case of tandems.



References

1. **Al-Hajj, M. *et al.*** (2003) Prospective identification of tumorigenic breast cancer cells. Proc. Natl. Acad. Sci. U.S.A. 100: 3983–3988.
2. **Gao, M. Q. *et al.*** (2010) $CD24^+$ cells from hierarchically organized ovarian cancer are enriched in cancer stem cells. Oncogene 29: 2672–2680.
3. **Li, C. P. *et al.*** (2007) Identification of pancreatic cancer stem cells. Cancer Res. 67: 1030–1037.

Warranty

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