Technical Data Sheet

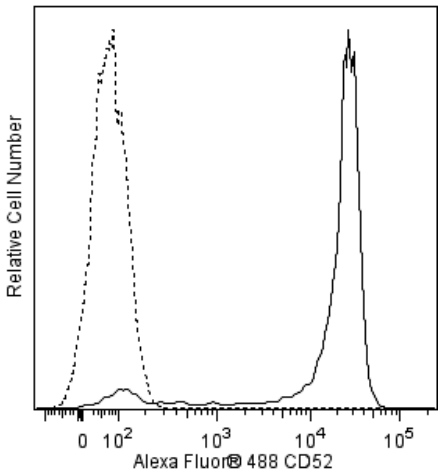
Alexa Fluor® 488 Mouse Anti-Human CD52

Product Information

Material Number:	**563609**
Alternate Name:	Cambridge pathology 1 Ag; CAMPATH-1; Epididymal secretory protein E5; HE5
Size:	50 tests
Vol. per Test:	5 µl
Clone:	4C8
Immunogen:	Human T Lymphocytes
Isotype:	Mouse (BALB/c) IgG3, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

The 4C8 monoclonal antibody specifically binds to CD52 which is also known as Cambridge pathology 1 antigen (CAMPATH-1) or Human epididymis-specific protein 5 (HE5). CD52 is a highly N-glycosylated, 25-29 kDa protein whose C-terminus is glycophosphatidylinositol anchored in the membrane. It is highly expressed on the surface of thymocytes and mature lymphocytes but not on their stem cell precursors. It is also expressed on monocytes, dendritic cells, eosinophils and epithelial cells of the epididymis and seminal vesicles but not on neutrophils, plasma cells, platelets or erythrocytes. Although its functional role is not well characterized, the CD52 antigen serves as an exquisitely sensitive target antigen for antibody and complement-mediated lysis of CD52-positive cells. Anti-CD52 antibodies are being used clinically to remove lymphocytes from transplanted bone marrow cell preparations and in the treatment of some malignant diseases.



Flow cytometric analysis of human CD52 expression on human peripheral blood lymphocytes. *Whole blood was stained with either Alexa Fluor® 488 Mouse IgG3, κ Isotype Control (Cat. No. 563636; dashed line histogram) or Alexa Fluor® 488 Mouse Anti-Human CD52 antibody (Cat. No. 563609; solid line histogram). Erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated to Alexa Fluor® 488 under optimum conditions, and unreacted Alexa Fluor® 488 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
554657	Stain Buffer (BSA)	500 ml	(none)
563636	Alexa Fluor® 488 Mouse IgG3, κ Isotype Control	50 µg	J606
349202	BD FACS™ Lysing Solution	100 ml	(none)
555899	Lysing Buffer	100 ml	(none)

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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
6. Alexa Fluor® 488 fluorochrome emission is collected at the same instrument settings as for fluorescein isothiocyanate (FITC).
7. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
9. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Ginaldi L, De Martinis M, Matutes E, et al. Levels of expression of CD52 in normal and leukemic B and T cells: correlation with in vivo therapeutic responses to Campath-1H. *Leuk Res.* 1998; 22(2):185-191. (Biology)

Masuyama J, Yoshio T, Suzuki K, et al. Characterization of the 4C8 antigen involved in transendothelial migration of CD26(hi) T cells after tight adhesion to human umbilical vein endothelial cell monolayers.. *J Exp Med.* 1999; 189(6):979-990. (Immunogen: Blocking, Flow cytometry, Stimulation, Western blot)

Watanabe T, Masuyama J, Sohma Y, et al. CD52 is a novel costimulatory molecule for induction of CD4+ regulatory T cells.. *Clin Immunol.* 2006; 120(3):247-259. (Clone-specific: (Co)-stimulation, Flow cytometry, Functional assay, Stimulation)

Zola H, Swart B, Nicholson I, Voss E. *Leukocyte and Stromal Cell Molecules. The CD Markers.* Hoboken, New Jersey: John Wiley & Sons, Inc.; 2007:1-581. (Biology)

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