Technical Data Sheet

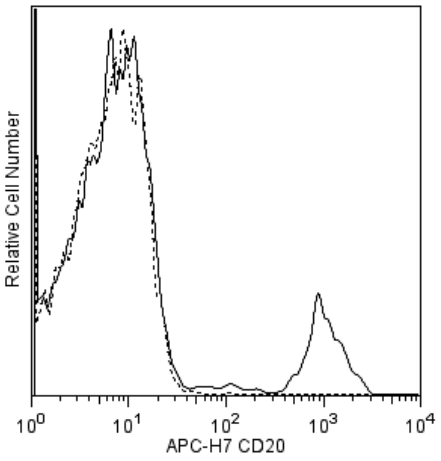
APC-H7 Mouse Anti-Human CD20

Product Information

Material Number:	**560853**
Alternate Name:	MS4A1; B1; Bp35; LEU-16; S7
Size:	50 tests
Vol. per Test:	5 µl
Clone:	2H7
Isotype:	Mouse (BALB/c) IgG2b, κ
Reactivity:	Human QC Testing: Rhesus, Baboon, or Cynomolgus
Workshop:	IV B201
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

The 2H7 monoclonal antibody specifically binds to CD20 that is encoded by the *MS4A1* (*Membrane-spanning 4-domains, subfamily A, member 1*) gene. CD20 is a 33-37 kDa unglycosylated four-transmembrane phosphoprotein. CD20 is expressed on pre-B-cells, resting and activated B cells and follicular dendritic cells but not on plasma cells. Low level CD20 expression is observed on a small subset of normal circulating T lymphocytes. The CD20 molecule is involved in the regulation of B-cell activation.



Flow cytometric analysis of CD20 expression on Rhesus macaque peripheral blood lymphocytes. *Rhesus macaque whole blood was stained with APC-H7 Mouse anti-Human CD20 antibody (Cat. No. 560853; solid line histogram) or with a APC-H7 Mouse IgG2b, κ Isotype Control (Cat. No. 560183; dashed line histogram). The erythrocytes were lysed with BD PharmLyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with APC-H7 under optimum conditions, and unconjugated antibody and APC-H7 were removed.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
560183	APC-H7 Mouse IgG2b, κ Isotype Control	0.1 mg	27-35
554656	Stain Buffer (FBS)	500 ml	(none)
555899	Lysing Buffer	100 ml	(none)

Product Notices

1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

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2. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
5. Cy is a trademark of Amersham Biosciences Limited.
6. BD APC-H7 is a tandem conjugate and an analog of APC-Cy7 with the same spectral properties. It has decreased intensity but it is engineered for greater stability and less spillover in the APC channel and consequently offers better performance than APC-Cy7. It has an absorption maximum of approximately 650 nm. When excited by light from a red laser, the APC fluorochrome can transfer energy to the cyanine dye, which then emits at a longer wavelength. The resulting fluorescent emission maximum is approximately 767 nm. BD recommends that a 750-nm longpass filter be used along with a red-sensitive detector such as the Hamamatsu R3896 PMT. As with APC-Cy7 special filters are required when using APC-H7 in conjunction with APC.
   Note: Although our APC-H7 products demonstrate higher lot-to lot consistency than other APC tandem conjugate products, and every effort is made to minimize the lot-to-lot variation in residual emission from APC, it is strongly recommended that every lot be tested for differences in the amount of compensation required and that individual compensation controls are run for each APC-H7 conjugate.
   Note: Cy is a trademark of Amersham Biosciences Limited.
7. Although BD APC-H7 is engineered to minimize spillover to the APC channel and is more stable and less affected by light, temperature, and formaldehyde-based fixatives, compared to other APC-cyanine tandem dyes, it is still good practice to minimize as much as possible, any light, temperature and fixative exposure when working with all fluorescent conjugates.
8. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Clark EA, Yokochi T. Human B cell and B cell blast-associated surface molecules defined with monoclonal antibodies. In: Bernard A, Boumsell L, Dausset J, Milstein C, Schlossman SF, ed. *Leukocyte Typing.* Berlin: Springer-Verlag; 1984:339-346. (Clone-specific: Flow cytometry, Immunoprecipitation)

Hultin LE, Hausner MA, Hultin PM, Giorgi JV. CD20 (pan-B cell) antigen is expressed at a low level on a subpopulation of human T lymphocytes. *Cytometry.* 1993; 14(2):193-204. (Biology)

Knapp W, Dorken B, Rieber EP, et al, ed. *Leucocyte Typing IV.* New York: Oxford University Press; 1989:1-1208. (Biology)