Technical Data Sheet

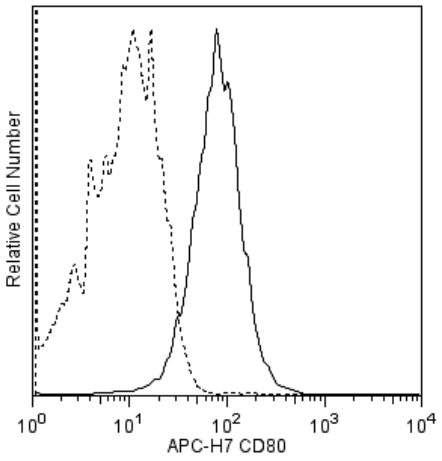
APC-H7 Mouse Anti-Human CD80

Product Information

Material Number:	**561134**
Alternate Name:	B7.1; B7-1; Activation B7-1 antigen; B7; BB1; CD28LG; CD28LG1; LAB7
Size:	50 tests
Vol. per Test:	5 µl
Clone:	L307.4
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	V B7.5
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

The L307.4 monoclonal antibody specifically reacts with B7/BB1, a 60 kDa transmembrane glycoprotein which was clustered as CD80 in the Fifth International Workshop on Human Leukocyte Differentiation Antigens. CD80, a member of the Ig supergene family, is expressed on activated B cells, macrophages, and dendritic cells. It is the ligand for two molecules expressed on T cells, CD28 and CD152 (CTLA-4). CD80 is also expressed on activated CD4-positive and CD8-positive T cells, appearing late after activation suggesting that activated T cells may be capable of autocrine costimulation via the CD28 activation pathway. The binding of CD28 by anti-CD28 or by CD80 results in T-cell activation and a signal for IL-2 production.



Flow cytometric analysis of CD80 expression on Raji cells. *Human Raji cells were stained with either APC-H7 Mouse Anti-Human CD80 antibody (Cat. No. 561134; solid line histogram) or with a APC-H7 Mouse IgG1, κ Isotype Control (Cat. No. 560167; dashed line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometry was performed on a BD LSR™ II Flow Cytometry 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 with APC-H7 under optimum conditions, and unconjugated antibody and APC-H7 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
560167	APC-H7 Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

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3. 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.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. 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.
7. 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.
8. Cy is a trademark of Amersham Biosciences Limited.
9. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Azuma M, Yssel H, Phillips JH, Spits H, Lanier LL. Functional expression of B7/BB1 on activated T lymphocytes. *J Exp Med.* 1993; 177(3):845-850. (Biology)

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Schlossman SF, Boumsell L, Gilks W, et al, ed. *Leukocyte Typing V: White Cell Differentiation Antigens.* New York: Oxford University Press; 1995. (Clone-specific: Flow cytometry)

Schwartz RH. Costimulation of T lymphocytes: the role of CD28, CTLA-4, and B7/BB1 in interleukin-2 production and immunotherapy. *Cell.* 1992; 71(7):1065-1068. (Biology)

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