Technical Data Sheet

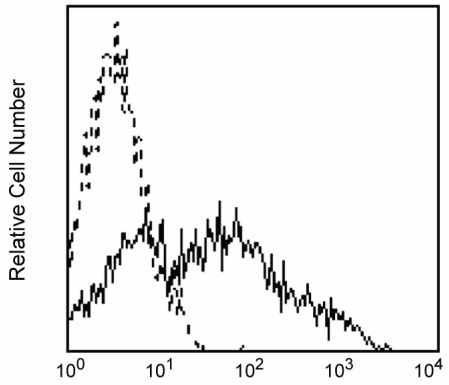
PerCP-Cy™5.5 Mouse Anti-Human CD38

Product Information

Material Number:	**561106**
Size:	25 µg
Concentration:	0.2 mg/ml
Clone:	HIT2
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	III 155
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The HIT2 monoclonal antibody specifically binds to CD38. CD38 is a 45 kDa type II single-chain transmembrane glycoprotein present on thymocytes, activated T cells and terminally differentiated B cells (plasma cells). Other reactive cells include monocytes, macrophages, dendritic cells and some epithelial cells. The CD38 antigen acts as an ectoenzyme that catalyzes the synthesis and hydrolysis of a Ca++ mobilizing agent, cyclic ADP-ribose. This intracellular calcium plays an important role in cell signaling pathways. Reports describe CD38 as participating in adhesion with CD31, immunoregulatory functions involving signal transduction leading to cell growth, apoptosis, and differentiation.



Profile of resting peripheral blood lymphocytes analyzed by flow cytometry

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with PerCP-Cy5.5 under optimum conditions, and unconjugated antibody and free PerCP-Cy5.5 were removed. Storage of PerCP-Cy5.5 conjugates in unoptimized diluent is not recommended and may result in loss of signal intensity. 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
550795	PerCP-Cy™5.5 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.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

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4. PerCP-Cy5.5–labelled antibodies can be used with FITC- and R-PE–labelled reagents in single-laser flow cytometers with no significant spectral overlap of PerCP-Cy5.5, FITC, and R-PE fluorescence.
5. PerCP-Cy5.5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using dual-laser cytometers, which may directly excite both PerCP and Cy5.5™. We recommend the use of cross-beam compensation during data acquisition or software compensation during data analysis.
6. This product is subject to proprietary rights of Amersham Biosciences Corp. and Carnegie Mellon University and made and sold under license from Amersham Biosciences Corp. This product is licensed for sale only for research. It is not licensed for any other use. If you require a commercial license to use this product and do not have one return this material, unopened to BD Biosciences, 10975 Torreyana Rd, San Diego, CA 92121 and any money paid for the material will be refunded.
7. 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.

References

Deaglio S, Morra M, Mallone R, et al. Human CD38 (ADP-ribosyl cyclase) is a counter-receptor of CD31, an Ig superfamily member. *J Immunol.* 1998; 160(1):395-402. (Biology)

Jackson DG, Bell JI. Isolation of a cDNA encoding the human CD38 (T10) molecule, a cell surface glycoprotein with an unusual discontinuous pattern of expression during lymphocyte differentiation. *J Immunol.* 1990; 144(7):2811-2815. (Biology)

Konopleva M, Estrov Z, Zhao S, Andreeff M, Mehta K. Ligation of cell surface CD38 protein with agonistic monoclonal antibody induces a cell growth signal in myeloid leukemia cells. *J Immunol.* 1998; 161(9):4702-4708. (Biology)

McMichael AJ, Beverly PCL, Gilks W, et al, ed. *Leukocyte Typing III: White Cell Differentiation Antigens.* New York: Oxford University Press; 1987. (Clone-specific)

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

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