

Technical Data Sheet

BV605 Mouse Anti-Human IgM**Product Information**

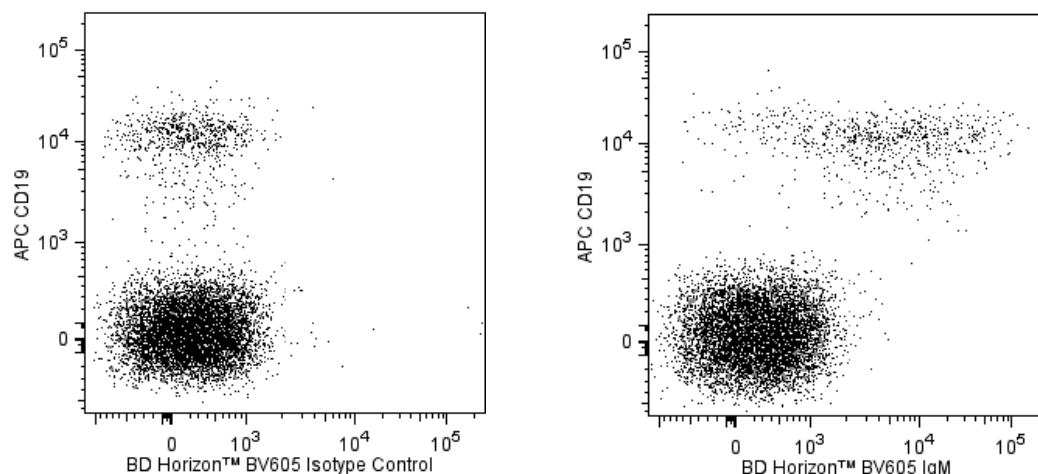
Material Number:	562977
Alternate Name:	IGHM; MU; Ig mu chain C region; AGM1; VH
Size:	50 Tests
Vol. per Test:	5 µl
Clone:	G20-127
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The G20-127 monoclonal antibody specifically binds to the heavy chain of human IgM. The majority of mature B lymphocytes express IgM. The G20-127 antibody does not react with other immunoglobulin heavy chain isotypes.

This antibody is conjugated to BD Horizon BV605 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 407-nm and Em Max of 602-nm, BD Horizon BV605 can be excited by a violet laser and detected with a standard 610/20-nm filter set. BD Horizon BV605 is a tandem fluorochrome of BD Horizon BV421 and an acceptor dye with an Em max at 605-nm. Due to the excitation of the acceptor dye by the green (532 nm) and yellow-green (561 nm) lasers, there will be significant spillover into the PE and BD Horizon PE-CF594 detectors off the green or yellow-green lasers. BD Horizon BV605 conjugates are very bright, often exhibiting brightness equivalent to PE conjugates and can be used as a third color off of the violet laser.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).



Two-color flow cytometric analysis of IgM expression on human peripheral blood lymphocytes. Human peripheral blood mononuclear cells were incubated in complete medium overnight in order to minimize subsequent nonspecific immunofluorescent staining. The cells were harvested and stained with APC Mouse Anti-Human CD19 antibody (Cat. No. 555415/561742) and either BD Horizon™ BV605 Mouse IgG1, κ Isotype Control (Cat. No. 562652; Left Panel) or BD Horizon™ BV605 Mouse Anti-Human IgM antibody (Cat. No. 562977; Right Panel). Two-color flow cytometric dot plots showing the correlated expression of cell surface IgM (or Ig Isotype control staining) versus CD19 were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.

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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 BD Horizon™ BV605 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV605 were removed.

Application Notes

Application

Flow cytometry

Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
562652	BV605 Mouse IgG1, κ Isotype Control	50 µg	X40
555415	APC Mouse Anti-Human CD19	100 Tests	HIB19
561742	APC Mouse Anti-Human CD19	25 Tests	HIB19
563794	Brilliant Stain Buffer	5 mL	(none)

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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
5. 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.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Although every effort is made to minimize the lot-to-lot variation in the efficiency of the fluorochrome energy transfer, differences in the residual emission from BD Horizon™ BV421 may be observed. Therefore, we recommend that individual compensation controls be performed for every BD Horizon™ BV605 conjugate.
9. CF™ is a trademark of Biotium, Inc.

References

Chtanova T, Tangye SG, Newton R, Frank N, Hodge MR, Rolph MS, Mackay CR. T follicular helper cells express a distinctive transcriptional profile, reflecting their role as non-Th1/Th2 effector cells that provide help for B cells. *J Immunol.* 2004; 173(1):68-78. (Clone-specific: Flow cytometry)

Le Gallou S, Caron G, Delalay C, Rossille D, Tarte K, Fest T. IL-2 requirement for human plasma cell generation: coupling differentiation and proliferation by enhancing MAPK-ERK signaling. *J Immunol.* 2012; 189(1):161-173. (Clone-specific: Flow cytometry)

Mei HE, Yoshida T, Sime W, Hiepe F, Thiele K, Manz RA, Radbruch A, Dorner T. Blood-borne human plasma cells in steady state are derived from mucosal immune responses. *Blood.* 2009; 113(11):2461-2469. (Clone-specific: Flow cytometry, Immunofluorescence)

Widhopf GF, 2nd, Brinson DC, Kipps TJ, Tighe H. Transgenic expression of a human polyreactive Ig expressed in chronic lymphocytic leukemia generates memory-type B cells that respond to nonspecific immune activation. *J Immunol.* 2004; 172(4):2092-2099. (Clone-specific: Flow cytometry)

Zola H, Macardie PJ, Flego L, Webster J. The expression of sub-population markers on B cells: a re-evaluation using high-sensitivity fluorescence flow cytometry. *Dis Markers.* 1991; 9(2):103-118. (Biology: Cell differentiation, Dot Blot, Flow cytometry, Fluorescence activated cell sorting, In situ hybridization)

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