BD Horizon™

Technical Data Sheet

BV421 Mouse Anti-Human CD20

Product Information

Material Number: 562873
Alternate Name: MS4A1; B1; Bp35; LEU-16; S7
Size: 100 Tests
Vol. per Test: 5 µl
Clone: 2H7
Immunogen: Human 6.16c1.3 B cell line
Isotype: Mouse (C57BL/6) IgG2b, κ
Reactivity: QC Testing: Human
Workshop: II B22; III B739, NL382; IV B201
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 2H7 monoclonal antibody specifically binds to CD20, 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 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.

This clone also cross-reacts with a subset of peripheral blood lymphocytes, but not monocytes nor granulocytes, of baboon and both rhesus and cynomolgus macaque monkeys. The distribution on lymphocytes is similar to that seen with normal human donor lymphocytes, namely bright staining on B lymphocytes and weak reactivity on a small subset of CD3-positive T lymphocytes.

The antibody was conjugated to BD Horizon BV421 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue conjugates.

Multiparameter flow cytometric analysis of CD20 expression on human peripheral blood lymphocytes. Whole blood was stained with either BD Horizon™ BV421 Mouse IgG2b, x Isotype Control (Cat. No. 562748; Left Panel) or with BD Horizon™ BV421 Mouse Anti-Human CD20 antibody (Cat. No. 562873; Right Panel). Erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). Bivariate flow cytometric dot plots show the correlated expression of CD20 (or Ig Isotype Control staining) versus cellular autofluorescence derived from gated events with the forward light-scatter characteristics of viable lymphocytes. Flow cytometry 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 with BD Horizon™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon BV421 were removed.

Application Notes

Suggested Companion Products

Product Notices

References

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)