

## Technical Data Sheet

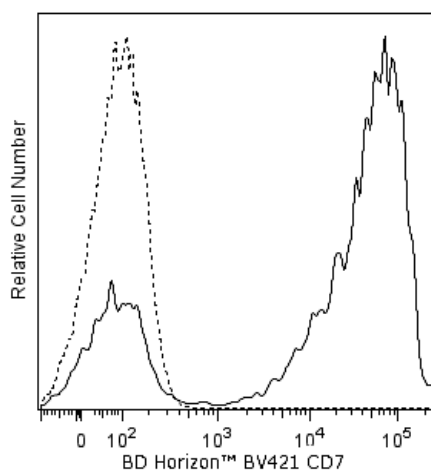
**BV421 Mouse Anti-Human CD7****Product Information**

|                         |                                                                   |
|-------------------------|-------------------------------------------------------------------|
| <b>Material Number:</b> | <b>562635</b>                                                     |
| <b>Alternate Name:</b>  | GP40; LEU-9; T-cell leukemia antigen; Tp40; TP41                  |
| <b>Size:</b>            | 100 tests                                                         |
| <b>Vol. per Test:</b>   | 5 µl                                                              |
| <b>Clone:</b>           | M-T701                                                            |
| <b>Isotype:</b>         | Mouse IgG1, κ                                                     |
| <b>Reactivity:</b>      | QC Testing: Human                                                 |
| <b>Workshop:</b>        | IV T163                                                           |
| <b>Storage Buffer:</b>  | Aqueous buffered solution containing BSA and ≤0.09% sodium azide. |

**Description**

The M-T701 monoclonal antibody specifically binds to a 40 kDa type I transmembrane glycoprotein expressed on thymocytes, T cells, pre-B cells and NK cells. CD7 is present in reduced density on monocytic cells and cell lines. Functional studies demonstrate that crosslinking of the CD7 can induce transmembrane calcium flux in T cells.

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.



**Flow cytometric analysis of CD7 expression on human peripheral blood lymphocytes.** Whole blood was stained with either BD Horizon™ BV421 Mouse Anti-Human CD7 antibody (Cat. No. 562635; solid line histogram) or with a BD Horizon™ BV421 Mouse IgG1, κ Isotype Control (Cat. No. 562438; dashed line histogram). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from 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**

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****Application**

|                |                  |
|----------------|------------------|
| Flow cytometry | Routinely Tested |
|----------------|------------------|

**Suggested Companion Products**

| Catalog Number | Name                                | Size   | Clone  |
|----------------|-------------------------------------|--------|--------|
| 562438         | BV421 Mouse IgG1, κ Isotype Control | 50 µg  | X40    |
| 555899         | Lysing Buffer                       | 100 ml | (none) |
| 554656         | Stain Buffer (FBS)                  | 500 ml | (none) |

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| 877.232.8995  | 800.979.9408 | 32.53.720.550 | 0120.8555.90 | 65.6861.0633 | 55.11.5185.9995         |

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## Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100- $\mu$ l 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/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.

## References

Barclay NA, Brown MH, Birkeland ML, et al, ed. *The Leukocyte Antigen FactsBook*. San Diego, CA: Academic Press; 1997. (Biology)  
Knapp W, Dörken B, Gilks WR, et al, ed. *Leucocyte Typing IV*. New York, NY: Oxford University Press; 1989:1-1182. (Clone-specific)  
Rabinowich H, Pricop L, Herberman RB, Whiteside TL. Expression and function of CD7 molecule on human natural killer cells. *J Immunol*. 1994; 152(2):517-526. (Biology)

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