

## Technical Data Sheet

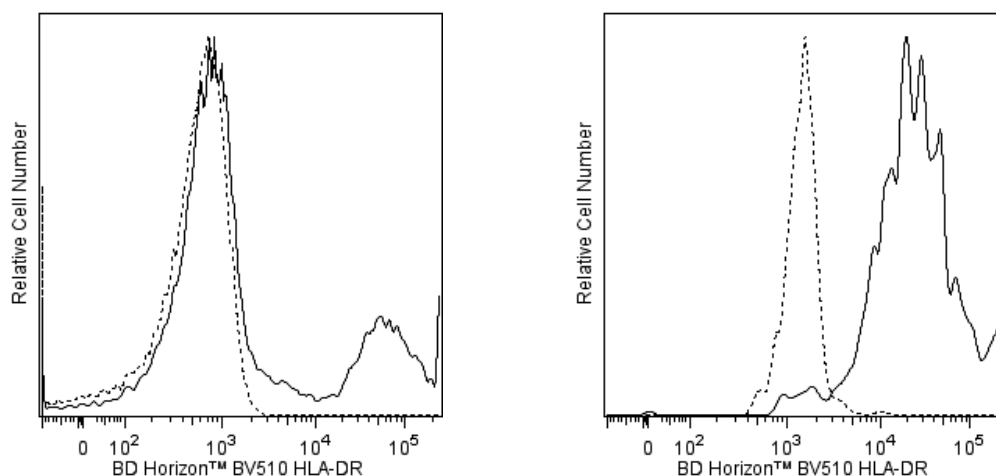
**BV510 Mouse Anti-Human HLA-DR****Product Information**

|                         |   |
|-------------------------|---|
| <b>Material Number:</b> | <b>563083</b>   |
| <b>Alternate Name:</b>  | MHC class II antigen; HLA class II histocompatibility antigen     |
| <b>Size:</b>            | 50 tests  |
| <b>Vol. per Test:</b>   | 5 µl  |
| <b>Clone:</b>           | G46-6   |
| <b>Isotype:</b>         | Mouse IgG2a, κ  |
| <b>Reactivity:</b>      | QC Testing: Human   |
| <b>Storage Buffer:</b>  | Aqueous buffered solution containing BSA and ≤0.09% sodium azide. |

**Description**

The G46-6 monoclonal antibody specifically binds to HLA-DR, a major histocompatibility complex (MHC) class II antigen. HLA-DR antigens are encoded by genes within the Human Leukocyte Antigen (HLA) Complex located on chromosome 6. HLA-DR is a transmembrane heterodimeric glycoprotein composed of an α chain (36 kDa) and a β subunit (27 kDa) expressed primarily on antigen presenting cells: B cells, dendritic cells, monocytes, macrophages, and thymic epithelial cells. HLA-DR is also expressed on activated T cells. This molecule plays a major role in mediating cellular interactions during antigen presentation to CD4-positive T cells.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon™ BV510 can be excited by the violet laser and detected in the BD Horizon™ V500 (525/50-nm) filter set. BD Horizon™ BV510 conjugates are useful for the detection of dim markers off the violet laser.



**Flow cytometric analysis of HLA-DR expression on human peripheral blood lymphocytes and monocytes.** Human whole blood was stained with the BD Horizon™ BV510 Mouse Anti-Human HLA-DR antibody (Cat. No. 563083; solid line histogram) or with a BD Horizon™ BV510 Mouse IgG2a, κ Isotype Control (Cat. No. 563027; dashed line histogram). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes (Left Panel) or monocytes (Right Panel). Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer 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™ BV510 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV510 were removed.

**Application Notes****Application**

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

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## Suggested Companion Products

| Catalog Number | Name  | Size       | Clone    |
|----------------|---|------------|----------|
| 554656         | Stain Buffer (FBS)                          | 500 ml     | (none)   |
| 555899         | Lysing Buffer                               | 100 ml     | (none)   |
| 563027         | BV510 Mouse IgG2a, $\kappa$ Isotype Control | 50 $\mu$ g | G155-178 |

## 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. Brilliant Violet™ 510 is a trademark of Sirigen.

## References

Dieckmann D, Plotner H, Berchtold S, Berger T, Schuler G. Ex vivo isolation and characterization of CD4(+)CD25(+) T cells with regulatory properties from human blood. *J Exp Med*. 2001; 193(11):1303-1310. (Clone-specific: Flow cytometry)

Kitani A, Chua K, Nakamura K, Strober W. Activated self-MHC-reactive T cells have the cytokine phenotype of Th3/T regulatory cell 1 T cells. *J Immunol*. 2000; 165(2):691-702. (Clone-specific: Flow cytometry)

Moran TP, Collier M, McKinnon KP, Davis NL, Johnston RE, Serody JS. A novel viral system for generating antigen-specific T cells. *J Immunol*. 2008; 175(5):3431-3438. (Clone-specific: Flow cytometry)

Sorg RV, Kogler G, Wernet P. Identification of cord blood dendritic cells as an immature CD11c- population. *Blood*. 1999; 93(7):2302-2307. (Clone-specific: Flow cytometry)

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