

## Technical Data Sheet

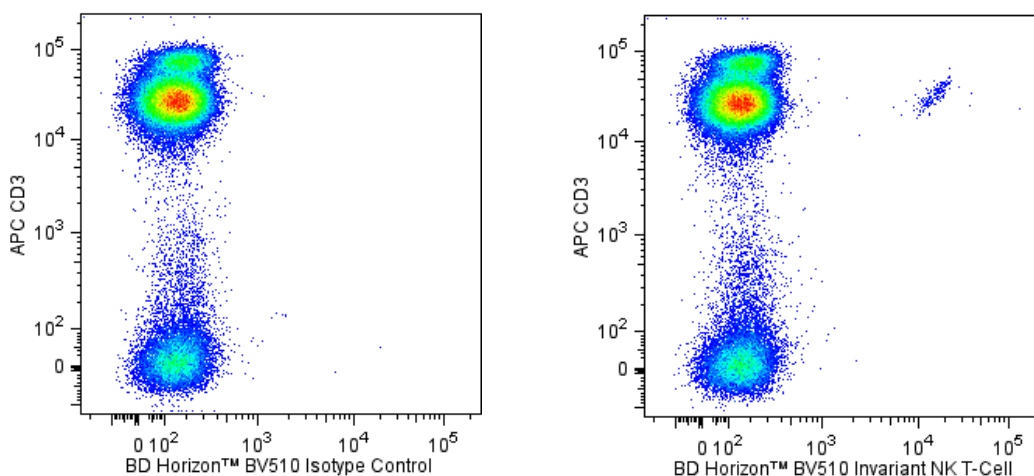
**BV510 Mouse Anti-Human Invariant NK T-Cell****Product Information**

<b>Material Number:</b>	<b>563267</b>
<b>Alternate Name:</b>	Vα24JaQ TCR Chain
<b>Size:</b>	50 tests
<b>Vol. per Test:</b>	5 µl
<b>Clone:</b>	6B11
<b>Immunogen:</b>	Peptide from CDR3 loop of the invariant TCR V24 sequence
<b>Isotype:</b>	Mouse (C57BL/6) IgG1, κ
<b>Reactivity:</b>	QC Testing: Human
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

Monoclonal antibody 6B11 reacts with a unique determinant in the CDR3 region of the invariant (Vα24-JαQ) TCR chain. Thus 6B11 identifies a subset of all Vα24 positive T cells. The binding of the PE-conjugate of 6B11 can be partially blocked by other antibodies specific for Vα24 (BD Biosciences Pharmingen, data not shown). This invariant chain is expressed on invariant NK T cells, which are a small subset of T lymphocytes that also express other NK cell molecules such as CD161. Invariant NK T cells have been reported to play an immunoregulatory role. The Vα24-JαQ interacts with the CD1d protein. Invariant NK T cells can be specifically activated by CD1d-presented antigen resulting in rapid production of IL-4 and IFN (also known as IFN-γ). Studies of NK T cells describe their role in anti-tumor immunity and autoimmunity.

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.



*Two-color flow cytometric analysis of Invariant NK T-Cell expression on human peripheral blood cells. Human whole blood was stained with APC Mouse Anti-Human CD3 antibody (Cat. No. 561811/555335/561810) and either BD Horizon™ BV510 Mouse IgG1 κ Isotype Control (Cat. No. 562946; Left Panel) or BD Horizon™ BV510 Mouse Anti-Human Invariant NK T-Cell antibody (Cat. No. 563267; Right Panel). Erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). Two-color flow cytometric dot plots show the correlated expression patterns of Invariant NK T-Cell (or Ig isotype control staining) versus CD3 for 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.*

**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.

**BD Biosciences**

[bdbiosciences.com](http://bdbiosciences.com)

<b>United States</b>	<b>Canada</b>	<b>Europe</b>	<b>Japan</b>	<b>Asia Pacific</b>	<b>Latin America/Caribbean</b>
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit [bdbiosciences.com/contact](http://bdbiosciences.com/contact)

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD



## Application Notes

### Application

Flow cytometry

Routinely Tested

### Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562946	BV510 Mouse IgG1, k Isotype Control	50 µg	X40
555899	Lysing Buffer	100 ml	(none)
561811	APC Mouse Anti-Human CD3	500 tests	UCHT1
561810	APC Mouse Anti-Human CD3	25 tests	UCHT1
555335	APC Mouse Anti-Human CD3	100 tests	UCHT1

### 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-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/pharming/protocols](http://www.bdbiosciences.com/pharming/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

Exley MA, Tahir SM, Cheng O, et al. A major fraction of human bone marrow lymphocytes are Th2-like CD1d-reactive T cells that can suppress mixed lymphocyte responses. *J Immunol.* 2001; 167(10):5531-5534. (Biology)

Illes Z, Kondo T, Newcombe J, Oka N, Tabira T, Yamamura T. Differential expression of NK T cell V alpha 24J alpha Q invariant TCR chain in the lesions of multiple sclerosis and chronic inflammatory demyelinating polyneuropathy. *J Immunol.* 2000; 164(8):4375-4381. (Biology)

Kukreja A, Cost G, Marker J, Zhang C, Sun Z, Lin-Su K, Ten S, Sanz M, Exley M, Wilson B, Porcelli S, Maclaren N. Multiple immuno-regulatory defects in type-1 diabetes. *J Clin Invest.* 2002; 109(1):131-140. (Immunogen: ELISA, Flow cytometry, Immunofluorescence)

Tahir SM, Cheng O, Shaulov A, et al. Loss of IFN-gamma production by invariant NK T cells in advanced cancer. *J Immunol.* 2001; 167(7):4046-4050. (Clone-specific: Flow cytometry)

Thomas SY, Hou R, Boyson JE, Means TK, Hess C, Olson DP, Strominger JL, Brenner MB, Gumperz JE, Wilson SB, Luster. CD1d-restricted NKT cells express a chemokine receptor profile indicative of Th1-type inflammatory homing cells. *J Immunol.* 2003; 171(5):2571-2580. (Clone-specific: Flow cytometry)

## BD Biosciences

[bdbiosciences.com](http://bdbiosciences.com)

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit [bdbiosciences.com/contact](http://bdbiosciences.com/contact)

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD

