

## Technical Data Sheet

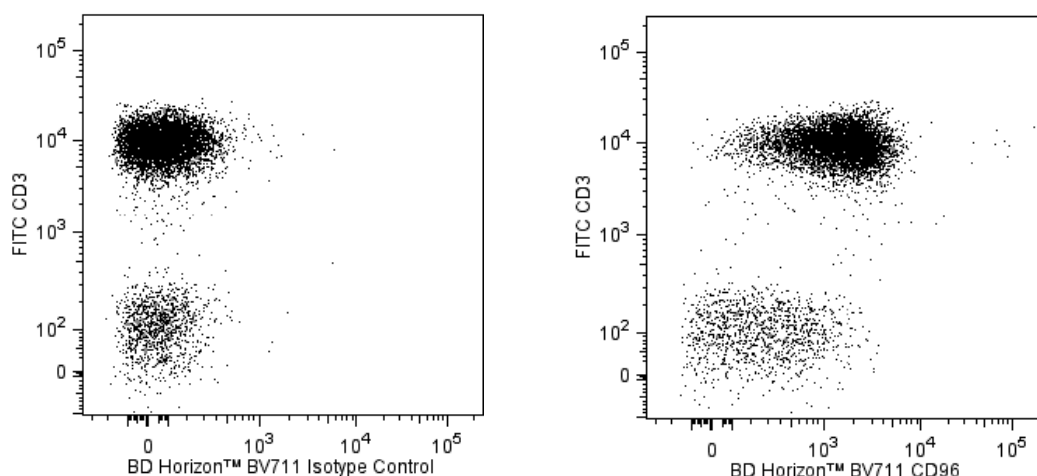
**BV711 Mouse Anti-Human CD96****Product Information**

<b>Material Number:</b>	<b>563174</b>
<b>Alternate Name:</b>	TACTILE; T cell activation increased late expression
<b>Size:</b>	50 tests
<b>Vol. per Test:</b>	5 µl
<b>Clone:</b>	6F9
<b>Immunogen:</b>	Human CD96 Transfected Cell Line
<b>Isotype:</b>	Mouse IgG1, κ
<b>Reactivity:</b>	QC Testing: Human
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The 6F9 monoclonal antibody specifically binds to human CD96, also known as TACTILE (T cell activation increased late expression). CD96 is a type I transmembrane glycoprotein and member of the Ig superfamily. CD96 is expressed at low levels on resting natural killer (NK) cells and T cells and at high levels on activated NK and T cells. CD96 is also expressed on some T-cell leukemia and acute myeloid leukemia cells. CD96 may serve as a marker for acute myelogenous leukemia stem cells. CD96 plays a role in the adhesive interactions of activated NK and T cells during immune responses. CD96 binds to the poliovirus receptor (CD155) that is highly expressed by some tumor cells. CD155-mediated ligation of CD96 can induce NK cell-mediated cytotoxicity. CD96-mediated uptake of CD155 may adversely affect NK cells and thus reduce their effectiveness in anti-tumor responses.

The antibody was conjugated to BD Horizon™ BV711 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. This dye is a tandem fluorochrome of BD Horizon™ BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon™ BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy™5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.



**Multicolor flow cytometric analysis of CD96 expression on human peripheral blood lymphocytes.** Human peripheral whole blood was stained with FITC Mouse Anti-Human CD3 antibody (Cat. No. 561807/555332/561806) and with either BD Horizon™ BV711 Mouse IgG1 Kappa Isotype Control (Cat. No. 563044; Left Panel) or BD Horizon™ BV711 Mouse Anti-Human CD96 (Cat. No. 563174; Right Panel) followed by treatment with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). Two-color flow cytometric dot plots show the expression of CD3 versus CD96 (or Ig Isotype control staining) for gated events with the forward- and side-light scattering 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™ BV711 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV711 were removed.

## Application Notes

### Application

Flow cytometry

Routinely Tested

## Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
563044	BV711 Mouse IgG1, k Isotype Control	50 µg	X40
555899	Lysing Buffer	100 ml	(none)
561807	FITC Mouse Anti-Human CD3	500 tests	UCHT1
555332	FITC Mouse Anti-Human CD3	100 tests	UCHT1
561806	FITC Mouse Anti-Human CD3	25 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. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
8. Cy is a trademark of Amersham Biosciences Limited.
9. Brilliant Violet™ 711 is a trademark of Sirigen.

## References

Fuchs A, Cella M, Giurisato E, Shaw AS, Colonna M. Cutting edge: CD96 (tactile) promotes NK cell-target cell adhesion by interacting with the poliovirus receptor (CD155). *J Immunol.* 2004; 172(7):3994-3998. (Biology)

Hosen N, Park CY, Tatsumi N, Oji Y, Sugiyama H, Gramatzki M, Krensky AM, Weissman IL. CD96 is a leukemic stem cell-specific marker in human acute myeloid leukemia. *Proc Natl Acad Sci U S A.* 2007; 104(26):11008-11013. (Biology)

Majeti R. Monoclonal antibody therapy directed against human acute myeloid leukemia stem cells. *Oncogene.* 2011; 30(9):1009-1019. (Biology)

Wang PL, O'Farrell S, Clayberger C, Krensky AM. Identification and molecular cloning of tactile. A novel human T cell activation antigen that is a member of the Ig gene superfamily. *J Immunol.* 1992; 148(8):2600-2608. (Biology)

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