Technical Data Sheet

BV421 Mouse Anti-Human TNF

Product Information

Material Number: 562783
Alternate Name: Tumor necrosis factor alpha; TNF-α; TNF-α; TNFSF2; Cachectin
Size: 50 Tests
Vol. per Test: 5 µl
Clone: MAb11
Immunogen: Recombinant Human TNF
Isotype: Mouse IgG1, κ
Reactivity: QC Testing: Human

Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The MAb11 monoclonal antibody specifically binds to human tumor necrosis factor (TNF, also known as TNF-α) protein. TNF is an efficient juxtacrine, paracrine and endocrine mediator of inflammatory and immune functions. It regulates the growth and differentiation of a variety of cell types. TNF is cytotoxic for transformed cells when in conjunction with IFN-γ. It is secreted by activated monocytes/macrophages and other cells such as B cells, T cells and fibroblasts. The immunogen used to generate the MAb11 hybridoma was recombinant human TNF. The MAb11 antibody has been reported to crossreact with Rhesus Macaque TNF.

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.

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.

Multiparameter flow cytometric analysis of TNF expressed in stimulated human peripheral blood mononuclear cells.

HCK-1 Human Cytokine Positive Control Cells (Cat. No. 555061) were permeabilized with BD Perm/Wash™ Buffer (Cat. No. 554723). The cells were then stained with either BD Horizon™ BV421 Mouse IgG1, κ Isotype Control (Cat. No. 562438; Left Panel) or BD Horizon™ BV421 Mouse Anti-Human TNF antibody (Cat. No. 562783/566275; Middle Panel). To demonstrate specificity of staining, the fixed and permeabilized cells were preincubated with Purified Mouse Anti-Human TNF antibody (10 µg, Cat. No. 554510; Right Panel) to block subsequent staining with the BV421 Mouse Anti-Human TNF antibody. Two-color flow cytometric dot plots show the correlated expression patterns of TNF, Ig isotype control or blocked TNF staining versus autofluorescence for gated events with the forward and side light-scatter characteristics of intact peripheral blood mononuclear cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.
Recommended Assay Procedure:
For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794/566349).

Suggested Companion Products

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<th>Catalog Number</th>
<th>Name</th>
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<td>X40</td>
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<td>566349</td>
<td>Brilliant Stain Buffer</td>
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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
7. BD Horizon Brilliant Violet 421 is covered by one or more of the following US patents: 8,158,444; 8,362,193; 8,575,303; 8,354,239.
8. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
9. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.

References

Jaattela, M., Biologic activities and mechanisms of action of tumor necrosis factor-α/cachectin. Lab Invest. 1991; 64:724-742. (Biology)
Verdier F, Aujoulat F, Condevaux F, Descotes J. Determination of lymphocyte subsets and cytokine levels in cynomolgus monkeys. Toxicology. 1995; 105(1):81-90. (Biology)