Technical Data Sheet

BV786 Mouse Anti-Human CD28

Product Information

Material Number:	742530
Size:	50 µg
Clone:	L293
Alternative Name:	CD28 antigen; T44; Tp44; TP44; Leu28
Reactivity:	Tested in Development:Human
Isotype:	Mouse BALB/c IgG1, κ
Immunogen:	HPB-ALL T cell line
Application:	Flow cytometry(Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	940
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The L293 monoclonal antibody specifically binds to CD28 which is also known as Tp44 or T44. The CD28 antigen is a 44 kDa homodimeric type I transmembrane glycoprotein which is present on most mature T cells, thymocytes, and plasma cells. CD28 is a cell-adhesion molecule (CAM) that functions as a receptor for CD80 (B7-1) and CD86 (B7-2) antigens, which are present on activated B lymphocytes, monocytes, and dendritic cells. Interaction of the CD28 antigen with CD80 or CD86 antigens, or both, co-stimulates CD2 and CD3 antigen/T-cell antigen receptor (TCR)-dependent T-cell-mediated proliferation and cytotoxicity. The L293 antibody has been demonstrated to bind to the same molecule as clone CD28.2, another CD28-specific antibody.

The BD Horizon Brilliant Violet™ 786 (BV786) Dye is part of the BD Horizon Brilliant Violet™ family of dyes. This tandem fluorochrome is comprised of a BV421 donor with an Ex Max of 407-nm and an acceptor dye with an Em Max at 786-nm. BV786, driven by BD innovation, is designed to be excited by the violet laser and detected using a filter, centered near 785 nm (e.g. 780/60 nm bandpass filter). Please ensure that your instrument's configurations (lasers and filters) are appropriate for this dye.

Multiparameter flow cytometric analysis using BD OptiBuild™ BV786 Mouse Anti-Human CD28 antibody (Cat. No. 742530) on Human peripheral blood. Flow cytometry was performed using a BD LSRFortessa™ X-20 Flow Cytometer System.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated to the dye under optimum conditions that minimize unconjugated dye and antibody. Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Recommended Assay Procedure

BD® CompBeads can be used as surrogates to assess fluorescence spillover (compensation). When fluorochrome conjugated antibodies are bound to BD® CompBeads, they have spectral properties very similar to cells. However, for some fluorochromes there can be small differences in spectral emissions compared to cells, resulting in spillover values

that differ when compared to biological controls. It is strongly recommended that when using a reagent for the first time, users compare the spillover on cells and BD® CompBeads to ensure that BD® CompBeads are appropriate for your specific cellular application.
For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime BD Horizon Brilliant dyes are used in a multicolor flow cytometry panel. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. When BD Horizon Brilliant Stain Buffer is used in the multicolor panel, it should also be used in the corresponding compensation controls for all dyes to achieve the most accurate compensation. For the most accurate compensation, compensation controls created with either cells or beads should be exposed to BD Horizon Brilliant Stain Buffer for the same length of time as the corresponding multicolor panel. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	
554657	Stain Buffer (BSA)	500 mL	
564219	Human BD Fc Block™	50 µg	Fc1
566349	Brilliant Stain Buffer	100 Tests	
566385	Brilliant Stain Buffer Plus	1000 Tests	
563330	BV786 Mouse IgG1, k Isotype Control	50 µg	X40
349202	Lysing Solution 10X Concentrate	100 mL	

Product Notices

1. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
2. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.
3. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
4. An isotype control should be used at the same concentration as the antibody of interest.
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.
7. Human donor specific background has been observed in relation to the presence of anti-polyethylene glycol (PEG) antibodies, developed as a result of certain vaccines containing PEG, including some COVID-19 vaccines. We recommend use of BD Horizon Brilliant™ Stain Buffer in your experiments to help mitigate potential background. For more information visit https://www.bdbiosciences.com/en-us/support/product-notices.
8. Please refer to http://regdocs.bd.com to access safety data sheets (SDS).
9. For U.S. patents that may apply, see bd.com/patents.

References

Azuma M, Cayabyab M, Buck D, Phillips JH, Lanier LL. CD28 interaction with B7 costimulates primary allogeneic proliferative responses and cytotoxicity mediated by small, resting T lymphocytes.. J Exp Med. 1992; 175(2):353-60. (Immunogen: Flow cytometry, Functional assay, Inhibition).
Azuma M, Phillips JH, Lanier LL. CD28- T lymphocytes. Antigenic and functional properties.. J Immunol. 1993; 150(4):1147-59. (Clone-specific: Flow cytometry, Fluorescence activated cell sorting).

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United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.268.5430	32.53.720.550	0120.8555.90	65.6861.0633	0800.771.7157

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