Technical Data Sheet

BV711 Mouse Anti-Human CD137

Product Information

Material Number:	740798
Size:	50 µg
Clone:	4B4-1
Alternative Name:	4-1BB, ILA, TNFRSF9
Reactivity:	Human (Tested in Development)
Isotype:	Mouse BALB/c IgG1, κ
Immunogen:	Recombinant Human 4-1BB Fusion Protein
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	3604
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The 4B4-1 monoclonal antibody specifically binds to CD137 which is also known as 4-1BB, and ILA (induced by lymphocyte activation). CD137 is a type I transmembrane glycoprotein that belongs to the TNF/NGF receptor family. It is encoded by TNFRSF9 (tumor necrosis factor receptor superfamily, member 9). CD137 is expressed on activated T cells, B cells, monocytes, and follicular dendritic cells. CD137 plays roles in the costimulation, differentiation and survival of T cells and B cells.

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-Cy5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.

Preparation and Storage Section

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 optimal conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) 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).

Suggested Companion Products

Catalog Number	Name	Size	Clone
563044	BV711 Mouse IgG1, k Isotype Control RUO	50 µg	
554656	Stain Buffer (FBS) RUO	500 mL	
554657	Stain Buffer (BSA) RUO	500 mL	
563794	Brilliant Stain Buffer RUO	100 Tests	
555899	Lysing Buffer RUO	100 mL	
349202	Lysing Solution 10X Concentrate CE/IVD	100 NA	
564219	Human BD Fc Block™ RUO	50 mg	

Product Notices

1. This antibody was developed for use in flow cytometry.

2. 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.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
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. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.
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. BD Horizon Brilliant Violet 711 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
10. Cy is a trademark of Amersham Biosciences Limited.
11. Alexa Fluor® is a registered trademark of Life Technologies Corporation.

References

Garni-Wagner BA, Lee ZH, Kim YJ, Wilde C, Kang CY, Kwon BS. 4-1BB is expressed on CD45RAhiROhi transitional T cell in humans. Cell Immunol. 1996; 169(1):91-98.
Hurtado JC, Kim SH, Pollok KE, Lee ZH, Kwon BS. Potential role of 4-1BB in T cell activation. Comparison with the costimulatory molecule CD28. J Immunol. 1995; 155(7):3360-3367.
Kim YJ, Broxmeyer HE. Therapeutic potential of 4-1BB (CD137) as a regulator for effector CD8(+) T cells. J Hematother Stem Cell Res. 2001; 10(4):441-449.
Zhou Z, Kim S, Hurtado J, et al. Characterization of human homologue of 4-1BB and its ligand. Immunol Lett. 1995; 45(1-2):67-73.

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