

# Technical Data Sheet

## BV711 Rat Anti-Mouse CD86

### Product Information

Material Number:	740709
Size:	50 µg
Clone:	PO3
Alternative Name:	Cd86; B7-2; B7.2; Ly58; Ly-58; ETC-1; MB7-2; TS/A2; Cd28I2
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat SD, also known as Sprague-Dawley (outbred) IgG2b, κ
Immunogen:	BALB/c Mouse B Leukemia Cell Line BCL1
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

### Description

The PO3 monoclonal antibody specifically binds to the B7-2 (CD86) costimulatory molecule, which is expressed on a broad spectrum of leukocytes, including B lymphocytes, T lymphocytes, macrophages, dendritic cells, and Langerhans cells, plus astrocytes. CD86 is expressed at low levels by freshly explanted peripheral B and T cells, and its expression is substantially increased by a variety of T and B cell-specific stimuli with a peak expression after 18-42 hours of culture. In contrast to most naive CD4+ T cells, memory CD4+ T cells express B7-2, both at the mRNA and protein levels. CD86, a ligand for CD28 and CTLA-4, is one of the accessory molecules that plays an important role in T cell-B cell costimulatory interactions. It has been shown to be involved in immunoglobulin class switching and triggering of mouse NK cell-mediated cytotoxicity. CD80 (B7-1) is an alternate ligand for CD28 and CTLA-4. PO3 antibody blocks the in vitro stimulation of T-cell proliferation of T-cell proliferation by soluble anti-CD3e antibody (mAb 145-2C11, Cat. No. 553057) in the presence of CD86-expressing accessory cells. In vivo administration of PO3 mAb can inhibit much of the autoantibody production in (NZB x NZW) F1 mice; and in combination with an anti-CD80 mAb, it can prevent the development and progression of mouse systemic lupus erythematosus-like autoimmune disease.

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
563045	BV711 Rat IgG2b, κ 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	

## 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 [wwwbdbiosciences.com/colors](http://wwwbdbiosciences.com/colors).
7. Please refer to [wwwbdbiosciences.com/us/s/resources](http://wwwbdbiosciences.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

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