

# Technical Data Sheet

## BV711 Mouse Anti-Mouse CD244.2

### Product Information

Material Number:	740671
Size:	50 µg
Clone:	2B4
Alternative Name:	CD242.2; 2B4 B6 Alloantigen; Ly90; NAIL; Nmrk; SLAMF4
Reactivity:	Mouse (Tested in Development)
Isotype:	Mouse 129, also known as 129/J or 129/SvJ IgG2b, κ
Immunogen:	rIL-2-propagated NK1.1+ cells from C57BL/6 mice
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	18106
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

### Description

CD244 is a type I transmembrane glycoprotein that is also known as Natural killer cell receptor 2B4 (NKR2B4), or Signaling lymphocytic activation molecule 4 (SLAMF4). CD244 is a member of the CD2 subset of the immunoglobulin superfamily (CD2 IgSF). It is expressed on all natural killer (NK) cells, IL-2-activated NK (LAK) cells, committed progenitors of NK cells, and a subset of T lymphocytes which mediate non-MHC-restricted cytotoxicity, including dendritic epidermal T cells. The 2B4 monoclonal antibody specifically binds to CD244.2, the 2B4 alloantigen which is expressed on C57BL/6 and C58/J mice, but not in most strains tested (A/J, AKR, BALB/c, CBA/J, CBA/N, C3H/He, C57BR, DBA/1, DBA/2, NZB, SJL/J, 129). At least two isoforms of CD244.2 protein, products of alternative splicing of hnRNA, are expressed on IL-2-activated C57BL/6 NK cells. They differ only in their cytoplasmic domains; with 2B4L (150-aa cytoplasmic tail) having inhibitory activity and 2B4S (93-aa tail) being stimulatory. The extracellular domain of CD244 is a ligand for another CD2 IgSF member, CD48. 2B4 antibody activates lytic and secretory functions of IL-2-cultured NK cells and CD244.2+ T 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
563125	BV711 Mouse 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.

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