

Technical Data Sheet

BV711 Mouse Anti-Human CD49b

Product Information

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| Material Number: | 742647 |
| Size: | 50 µg |
| Clone: | AK-7 (also known as AK7) |
| Alternative Name: | Integrin alpha-2; ITGA2; VLA-2 alpha; Platelet GPIa; Collagen receptor; BR |
| Reactivity: | Human (Tested in Development) |
| Isotype: | Mouse IgG1, κ |
| Application: | Flow cytometry (Qualified) |
| Concentration: | 0.2 mg/ml |
| Storage Buffer: | Aqueous buffered solution containing ≤0.09% sodium azide. |
| Regulatory Status: | RUO |

Description

The AK-7 monoclonal antibody specifically binds to CD49b. CD49b is also known as integrin α2 chain, VLA-α2, and GP1a. CD49b is a type I transmembrane glycoprotein and belongs to the integrin family of extracellular matrix and cell-cell adhesion receptors. CD49b is expressed on numerous cell types including platelets, activated T cells, B cells, and monocytes. CD49b noncovalently associates with CD29 to form the VLA-2 complex (integrin α2/β1). The VLA-2 complex serves as a receptor for collagen and laminin. It can regulate responses mediated by proinflammatory effector 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 |
|----------------|---|-----------|-------|
| 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 | |
| 563044 | BV711 Mouse IgG1, κ Isotype Control RUO | 50 µg | |

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 GE Healthcare.
11. Alexa Fluor® is a registered trademark of Life Technologies Corporation.

References

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