

Technical Data Sheet

BV711 Rat Anti-Mouse PDC-TREM

Product Information

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| Material Number: | 751709 |
| Size: | 50 µg |
| Clone: | 4A6 |
| Alternative Name: | A530064D06Rik; pdctrem; plasmacytoid dendritic cell-specific receptor; Trem4; triggering receptor expressed on myeloid cells 4 |
| Reactivity: | Mouse (Tested in Development) |
| Isotype: | Rat WI, also known as Wistar (outbred) IgG2a, κ |
| Immunogen: | Mouse PDC-TREM Recombinant Protein |
| Application: | Flow cytometry (Qualified) |
| Concentration: | 0.2 mg/ml |
| Storage Buffer: | Aqueous buffered solution containing ≤0.09% sodium azide. |
| Regulatory Status: | RUO |

Description

The 4A6 monoclonal antibody specifically recognizes mouse PDC-TREM, also known as TREM-4, which is a member of the Triggering Receptor Expressed on Myeloid cells (TREM) family of protein-binding receptors that regulate innate immune responses. Stimulation of plasmacytoid dendritic cells (pDCs) through toll-like receptors (TLRs) induces type I interferon production and PDC-TREM expression. Cell-surface expression and immune regulatory signaling by PDC-TREM require its association with Plexin-A1 and DNAX-activation Protein 12 (DAP12) and further augments type I interferon production by pDCs.

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

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 to the dye under optimum conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

BD™ CompBeads can be used as surrogates to assess fluorescence spillover (Compensation). When fluorochrome conjugated antibodies are bound to 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 CompBead to ensure that BD Comp beads are appropriate for your specific cellular application.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes 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. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|----------------|--|--------|--------|
| 553141 | Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) | 0.1 mg | 2.4G2 |
| 563047 | BV711 Rat IgG2a, κ Isotype Control | 50 µg | R35-95 |

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| 554656 | Stain Buffer (FBS) | 500 mL |
| 554657 | Stain Buffer (BSA) | 500 mL |
| 563794 | Brilliant Stain Buffer | 100 Tests |
| 555899 | Lysing Buffer | 100 mL |
| 566349 | Brilliant Stain Buffer | 1000 Tests |
| 566385 | Brilliant Stain Buffer Plus | 1000 Tests |

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. Researchers should determine the optimal concentration of this reagent for their individual applications.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.
7. 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.
8. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
9. Alexa Fluor® is a registered trademark of Life Technologies Corporation.
10. 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.
11. Cy is a trademark of GE Healthcare.

References

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Swiecki M, Wang Y, Vermi W, Gilfillan S, Schreiber RD, Colonna M. Type I interferon negatively controls plasmacytoid dendritic cell numbers in vivo. *J Exp Med.* 2011; 208(12):2367-2374. (Biology: Flow cytometry).

Watarai H, Sekine E, Inoue S, Nakagawa R, Kaisho T, Taniguchi M. PDC-TREM, a plasmacytoid dendritic cell-specific receptor, is responsible for augmented production of type I interferon. *Proc Natl Acad Sci USA.* 2008; 105(8):2993-8. (Immunogen: Flow cytometry).

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