

Technical Data Sheet

BV510 Rat Anti-Mouse CR1g

Product Information

Material Number:	749505
Size:	50 µg
Clone:	17C9
Alternative Name:	CR1g; Vsig4; Z39IG
Reactivity:	Tested in Development:Mouse
Isotype:	Rat IgG2a, 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 17C9 monoclonal antibody specifically recognizes Complement receptor of the immunoglobulin superfamily (CR1g) which is encoded by the Vsig4 (V-set and immunoglobulin domain containing 4) gene. CR1g is a ~45 kDa single-pass type I transmembrane glycoprotein that contains a variable (V-type) immunoglobulin domain in its extracellular region which is required for binding complement components and promoting phagocytosis. CR1g is expressed on Kupffer cells and tissue resident macrophages, including a subset of resident peritoneal macrophages. CR1g binds complement fragments C3b and iC3b and plays important roles in innate and adaptive immunity. This complement receptor is involved in regulation of the complement cascade and serves as a phagocytic receptor in the clearance of pathogens, immune complexes, and apoptotic cells. CR1g-positive macrophages can reportedly function in the negative regulation of T-cell proliferation and IL-2 production.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon BV510 can be excited by the violet laser and detected in the BD Horizon V500 (525/50-nm) filter set. BD Horizon BV510 conjugates are useful for the detection of dim markers off the violet laser.

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 with BD Horizon BV510 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
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg
554656	Stain Buffer (FBS)	500 mL
554657	Stain Buffer (BSA)	500 mL
563794	Brilliant Stain Buffer	100 Tests
555899	Lysing Buffer	100 mL
562952	BV510 Rat IgG2a, κ Isotype Control	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 510 is covered by one or more of the following US patents: 8,575,303; 8,354,239.

References

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Fu W, Wojtkiewicz G, Weissleder R, Benoist C, Mathis D. Early window of diabetes determinism in NOD mice, dependent on the complement receptor CR1g, identified by noninvasive imaging.. *Nat Immunol*. 2012; 13(4):361-8. (Clone-specific).

Small AG, Al-Baghdadi M, Quach A, Hii C, Ferrante A. Complement receptor immunoglobulin: a control point in infection and immunity, inflammation and cancer.. *Swiss Med Wkly*. 2016; 146:w14301. (Biology).

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