

Technical Data Sheet

BV711 Rat Anti-Mouse CD204 (SR-AI, MSR1)

Product Information

Material Number:	748088
Size:	50 µg
Clone:	268318
Alternative Name:	SR-AI; Scara1; MSR; Msr1
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat IgG2b, κ
Immunogen:	Mouse MSR1 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 268318 monoclonal antibody specifically recognizes CD204 which is also known as Scavenger receptor class A member 1 (SR-A1 or SCARA1), Scavenger receptor type A (SRA-A), Macrophage acetylated LDL receptor I and II, or Macrophage scavenger receptor types I and II. CD204 is a trimeric type II transmembrane glycoprotein that is encoded by MSR1 (Msr1 macrophage scavenger receptor 1) which belongs to the type 1 class A scavenger receptor family. The C-terminal extracellular region of CD204 contains a scavenger receptor cysteine-rich domain followed by a collagen domain and an alpha-helical coiled coil. It is expressed on monocytes, macrophages, microglia, dendritic cells, and mast cells. CD204 is involved in the uptake of various negatively-charged macromolecules including modified proteins, polysaccharides, polyribonucleic acids, and microbial products and plays a role in innate and acquired immunity.

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 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
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
565804	Red Nucleic Acid Stain	0.5 mL	
563045	BV711 Rat IgG2b, κ Isotype Control	50 µg	R35-38
554656	Stain Buffer (FBS)	500 mL	
554657	Stain Buffer (BSA)	500 mL	
563794	Brilliant Stain Buffer	100 Tests	

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

- Cavnar MJ, Zeng S, Kim TS, et al. KIT oncogene inhibition drives intratumoral macrophage M2 polarization.. *J Exp Med*. 2013; 210(13):2873-86.
- Freeman M, Ashkenas J, Rees DJ, et al. An ancient, highly conserved family of cysteine-rich protein domains revealed by cloning type I and type II murine macrophage scavenger receptors.. *Proc Natl Acad Sci USA*. 1990; 87(22):8810-4.
- PrabhuDas MR, Baldwin CL, Bollyky PL, et al. A Consensus Definitive Classification of Scavenger Receptors and Their Roles in Health and Disease.. *J Immunol*. 2017; 198(10):3775-3789.

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