

Technical Data Sheet

BV711 Rat Anti-Mouse Rae-1

Product Information

Material Number:	748077
Size:	50 µg
Clone:	186107
Alternative Name:	Raet1; Retinoic Acid Early Transcript 1
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat IgG2a, κ
Immunogen:	Mouse Raet1d 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 186107 monoclonal antibody specifically recognizes the Retinoic acid early inducible 1 (Rae-1) family of glycoproteins which is also known as retinoic acid early transcript 1. This family includes Rae-1α, β, δ, ε and γ, which are encoded by Raet1a, Raet1b, Raet1d, Raet1e, and Raet1c, respectively. Although expressed by some cells during mouse embryonic development, expression of these highly homologous membrane proteins is either low or absent on cells within adult tissues. These glycoposphatidylinositol (GPI)-linked proteins are structurally related to MHC class I molecules and contain alpha 1 and 2 domains. The Rae-1 family of glycoproteins serve as ligands for CD314 (NKG2D) which functions as an activating receptor expressed on some cytotoxic T cells and NK cells. Stress-induced Rae-1 proteins are expressed on tumor cells and might play a role in tumor rejection.

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	
563047	BV711 Rat IgG2a, κ Isotype Control	50 µg	R35-95
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

Narumi K, Miyakawa R, Ueda R, et al. Proinflammatory Proteins S100A8/S100A9 Activate NK Cells via Interaction with RAGE.. *J Immunol.* 2015; 194(11):5539-48.

Nomura M, Takihara Y, Shimada K. Isolation and characterization of retinoic acid-inducible cDNA clones in F9 cells: one of the early inducible clones encodes a novel protein sharing several highly homologous regions with a Drosophila polyhomeotic protein.. *Differentiation.* 1994; 57(1):39-50.

Ogasawara K, Hamerman JA, Ehrlich LR, et al. NKG2D blockade prevents autoimmune diabetes in NOD mice. *Immunity.* 2004; 20(6):757-767.

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