

Technical Data Sheet

BUV805 Mouse Anti-Human CD180

Product Information

Material Number:	748466
Size:	50 µg
Clone:	G28-8
Alternative Name:	RP105; Lymphocyte antigen 64; LY64; Bgp95
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 G28-8 monoclonal antibody specifically recognizes RP105/Bgp95, a 95-105 kDa type I membrane protein consisting of extracellular leucine-rich repeats and a short cytoplasmic domain. It is expressed on mantle zone B cells, but weakly on germinal center B cells. RP105/Bgp95 is also expressed on peripheral blood monocytes, dendritic cells, and a subset of peripheral blood lymphocytes. The extracellular domain associates with a molecule called MD-1 to form a cell surface receptor complex RP105/Bgp95/MD-1. This receptor belongs to the family of toll-like receptors (TLR). Studies show that RP105/Bgp95/MD-1, working in concert with TLR4, controls B cell recognition and signaling of lipopolysaccharide (LPS). Reports on functional studies show that G28-8 monoclonal antibody can induce a G0 to G1 cell cycle transition and was synergistic with PMA, anti-µ, or anti-CD40 in inducing proliferation of resting B cells.

The antibody was conjugated to BD Horizon™ BUV805 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome of BD Horizon BUV395 with an Ex Max of 348 nm and an acceptor dye with an Em Max at 805 nm. BD Horizon Brilliant BUV805 can be excited by the ultraviolet laser (355 nm) and detected with a 820/60 filter and a 770LP.

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 BUV805 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
612897	BUV805 Mouse IgG1, κ Isotype Control X40 RUO	50 µg	
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	

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 Ultraviolet 805 is covered by one or more of the following US patents: 8,110,673, 8,158,444; 8,227,187; 8,575,303; 8,354,239.

References

- Fugier-Vivier I, de Bouteiller O, Guret C. Molecular cloning of human RP105. *Eur J Immunol.* 1997; 27(7):1824-1827. (Biology: Flow cytometry).
- Mason D, David Mason .. et al., ed. *Leucocyte typing VII : white cell differentiation antigens : proceedings of the Seventh International Workshop and Conference held in Harrogate, United Kingdom.* Oxford: Oxford University Press; 2002; .
- Ogata H, Su I, Miyake K, et al. The toll-like receptor protein RP105 regulates lipopolysaccharide signaling in B cells. *J Exp Med.* 2000; 192(1):23-29. (Biology: Flow cytometry).
- Roshak AK, Anderson KM, Holmes SD. Anti-human RP105 sera induces lymphocyte proliferation. *J Leukoc Biol.* 1999; 65(1):43-49. (Biology: Flow cytometry).
- Valentine MA, Clark EA, Shu GL, Norris NA, Ledbetter JA. Antibody to a novel 95-kDa surface glycoprotein on human B cells induces calcium mobilization and B cell activation. *J Immunol.* 1988; 140(12):4071-4078. (Biology: Flow cytometry).

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United States 877.232.8995	Canada 888.268.5430	Europe 32.53.720.550	Japan 0120.8555.90	Asia Pacific 65.6861.0633	Latin America/Caribbean 0800.771.7157
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