

Technical Data Sheet

BUV395 Rat Anti-Human Claudin-1

Product Information

Material Number:	748222
Size:	50 µg
Clone:	421203
Alternative Name:	CLD1; CLDN1; claudin-1; ILVASC; SEMP1
Reactivity:	Human (Tested in Development)
Isotype:	Rat IgG2a, κ
Immunogen:	Human Claudin-1 Transfected Cell Line
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The 421203 monoclonal antibody specifically recognizes Claudin-1 which is also known as Senescence-associated epithelial membrane protein 1 (SEMP1) or Ichthyosis, leukocyte vacuoles, alopecia, and sclerosing cholangitis (ILVASC). Claudin-1 is a ~23 kDa multi-pass membrane protein that is encoded by CLDN1 (claudin 1) which belongs to the claudin family. Claudin-1 is expressed by Langerhans cells, dendritic cells, epithelial cells and endothelial cells. It serves as a major component of tight junctions between epithelial or endothelial cells. Claudin-1 may also function as a co-receptor for Hepatitis C virus (HCV) entry into hepatic cells. Dysregulated Claudin-1 expression has been detected in multiple types of cancer.

The antibody was conjugated to BD Horizon™ BUV395 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye has been exclusively developed by BD Biosciences to have minimal spillover into other detectors, making it an optimal choice for multicolor flow cytometry. With an Ex Max at 348 nm and an Em Max at 395 nm, BD Horizon BUV395 can be excited with a 355 nm laser and detected with a 379/28 filter.

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 BUV395 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
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 IVD	100 NA	
564219	Human BD Fc Block™ RUO	50 mg	
563556	BUV395 Rat IgG2a, κ Isotype Control RUO	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 Ultraviolet 395 is covered by one or more of the following US patents: 8,158,444; 8,575,303; 8,354,239.

References

Farquhar MJ, Hu K, Harris HJ, et al. Hepatitis C virus induces CD81 and claudin-1 endocytosis.. *J Virol.* 2012; 86(8):4305-16.
 Furuse M, Fujita K, Hiiragi T, Fujimoto K, Tsukita S. Claudin-1 and -2: novel integral membrane proteins localizing at tight junctions with no sequence similarity to occludin.. *J Cell Biol.* 1998; 141(7):1539-50.

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