

# Technical Data Sheet

## BV480 Rat Anti-Human Claudin-1

### Product Information

Material Number:	748200
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 BV480 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 436-nm and Em Max at 478-nm, BD Horizon BV480 can be excited by the violet laser and detected in the BD Horizon BV510 (525/40-nm) filter set. BV480 has less spillover into the BV605 detector and, in general, is brighter than BV510.

### 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 BV480 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
349202	Lysing Solution 10X Concentrate IVD	100 NA	
564219	Human BD Fc Block™ RUO	50 mg	
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	
565630	BV480 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](http://www.bdbiosciences.com/colors).
7. Please refer to [www.bdbiosciences.com/us/s/resources](http://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 480 is covered by one or more of the following US patents: 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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