

Technical Data Sheet

BV510 Mouse Anti-Human Podoplanin

Product Information

Material Number:	749726
Size:	50 µg
Clone:	LpMab-23
Alternative Name:	PDPN; T1-alpha; T1A; GP36; GP40; OTS8; T1A2; TI1A; T1A-2; AGGRUS; PA2.26
Reactivity:	Human (Tested in Development)
Isotype:	Mouse BALB/c IgG1, κ
Immunogen:	Human Podoplanin 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 LpMab-23 monoclonal antibody specifically recognizes a cancer-specific form of human podoplanin. Podoplanin is a 38-44 kDa type I transmembrane glycoprotein that is encoded by PDPN. This heavily glycosylated mucin type protein is named for its expression on kidney glomerular epithelial cells known as podocytes. Although the podoplanin protein is expressed on a wide variety of cell types in normal tissues (including placenta, lung, skeletal muscle and brain), LpMab-23 recognizes an altered glycosylation pattern that occurs on oral cancer cells and it shows minimal reactivity with the surrounding non-cancerous tissue. In contrast, the LpMab-17 monoclonal antibody recognizes a non-glycosylated epitope of podoplanin on normal and cancer cells. Podoplanin induces platelet aggregation via its three platelet aggregation-stimulating (PLAG) domains; it binds C-type lectin domain family 1 member B (Clec1B, also known as CLEC2); and it is involved in actin cytoskeleton organization and in cellular adhesion and migration. It also plays roles in organogenesis, vascular development, inflammatory diseases, tumorigenesis, and cancer cell motility and metastasis.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon BV510 can be excited by the violet laser and detected in the BD Horizon V500 (525/50-nm) filter set. BD Horizon BV510 conjugates are useful for the detection of dim markers off the violet laser.

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 BV510 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)	500 mL	
554657	Stain Buffer (BSA)	500 mL	
563794	Brilliant Stain Buffer	100 Tests	
555899	Lysing Buffer	100 mL	
349202	Lysing Solution 10X Concentrate	100 NA	
564219	Human BD Fc Block™	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 wwwbdbiosciences.com/colors.
7. Please refer to wwwbdbiosciences.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 510 is covered by one or more of the following US patents: 8,575,303; 8,354,239.

References

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