

Technical Data Sheet

BV510 Mouse Anti-Human P-glycoprotein (CD243)

Product Information

Material Number:	742848
Size:	50 µg
Clone:	17F9
Alternative Name:	CD243; ABCB1; ABC20; CLCS; GP170; MDR1; P-GP; PGY1
Reactivity:	Tested in Development:Human
Isotype:	Mouse BALB/c IgG2b, 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 17F9 monoclonal antibody specifically binds to the 170-180 kDa transmembrane glycoprotein (P-glycoprotein), a product of the multidrug resistance-1 (MDR1) gene. This glycoprotein is expressed on MDR positive cells and has been reported to be expressed on many normal tissues, such as adrenal glands and endothelium, in the brain and skin. P-glycoprotein is known to impart drug resistance to cells by pumping many anti-cancer drugs out of the cytoplasm. 17F9 antibody is able to partially block the binding of UIC2 antibody (another MDR-specific monoclonal antibody).

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 to the dye under optimum conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

BD™ CompBeads can be used as surrogates to assess fluorescence spillover (Compensation). When fluorochrome conjugated antibodies are bound to CompBeads, they have spectral properties very similar to cells. However, for some fluorochromes there can be small differences in spectral emissions compared to cells, resulting in spillover values that differ when compared to biological controls. It is strongly recommended that when using a reagent for the first time, users compare the spillover on cells and CompBead to ensure that BD Comp beads are appropriate for your specific cellular application.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes 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. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

Catalog Number	Name	Size
564220	Human BD Fc Block™	50 µg
564219	Human BD Fc Block™	50 µg
566349	Brilliant Stain Buffer	100 Tests
566385	Brilliant Stain Buffer Plus	1000 Tests
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 mL
563025	BV510 Mouse IgG2b, κ Isotype Control	50 μ g

Product Notices

1. 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.
2. Researchers should determine the optimal concentration of this reagent for their individual applications.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. 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.
7. BD Horizon Brilliant Violet 510 is covered by one or more of the following US patents: 8,575,303; 8,354,239.
8. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
9. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.

References

Shi T, Wrin J, Reeder J, Liu D, Ring DB. High-affinity monoclonal antibodies against P-glycoprotein. *Clin Immunol Immunopathol*. 1995; 76(1):44-51. (Immunogen: ELISA, Immunoprecipitation, Radioimmunoassay).

Benard J, Bourhis J, Riou G. Clinical significance of multiple drug resistance in human cancers. *Anticancer Res*. 1990; 10(5A):1297-1302. (Biology).

Goldstein LJ, Galski H, Fojo A, et al. Expression of a multidrug resistance gene in human cancers. *J Natl Cancer Inst*. 1989; 81(2):116-124. (Biology).

Aihara M, Aihara Y, Schmidt-Wolf G, et al. A combined approach for purging multidrug-resistant leukemic cell lines in bone marrow using a monoclonal antibody and chemotherapy. *Blood*. 1991; 77(9):2079-84. (Immunogen: Depletion, 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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