

Technical Data Sheet

BV510 Mouse Anti-Human CD135

Product Information

Material Number:	743338
Size:	50 µg
Clone:	4G8
Alternative Name:	FLK2; FLT-3; Fms-related tyrosine kinase 3; STK-1
Reactivity:	Tested in Development:Human
Isotype:	Mouse BALB/c IgG1, κ
Application:	Flow cytometry(Qualified)
Concentration:	0.2 mg/ml
Workshop No.:	VI C-27
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The 4G8 monoclonal antibody specifically binds to CD135 which is also known as FMS-like tyrosine kinase 3 (FLT3), Fetal liver kinase 2 (FLK2) and Stem cell tyrosine kinase 1 (STK1). CD135 is a 155-160 kDa type I transmembrane glycoprotein. It belongs to subclass III of the receptor tyrosine kinase (RTK) family which includes receptors for M-CSF (CD115), SCF/c-Kit Ligand (CD117), and PDGF (CD140a and CD140b). CD135 is expressed on multipotential, myelomonocytic and primitive B-cell progenitors. The most primitive hematopoietic progenitor cells express low levels of CD135. CD135 plays the role of growth factor receptor for early hematopoietic progenitors. Reports from studies with knockout mice have shown that targeted CD135 disruption impaired the development of primitive progenitor cells of all hematopoietic lineages with significant impact on lymphopoietic precursors.

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
564219	Human BD Fc Block™	50 µg
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
562946	BV510 Mouse IgG1, κ Isotype Control	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 Violet 510 is covered by one or more of the following US patents: 8,575,303; 8,354,239.

References

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Rappold I, Ziegler BL, Kohler I, et al. Functional and phenotypic characterization of cord blood and bone marrow subsets expressing FLT3 (CD135) receptor tyrosine kinase. *Blood*. 1997; 90(1):111-125. (Immunogen: ELISA, Flow cytometry, Immunoprecipitation).

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