Technical Data Sheet

BB515 Mouse Anti-Human CD11c

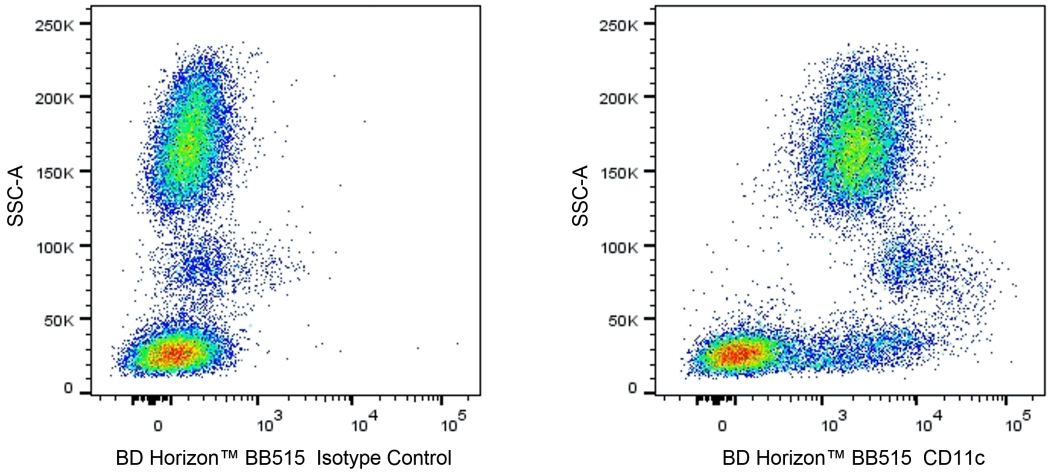
Product Information

Material Number:	**566835**
Alternate Name:	ITGAX; integrin alpha X; CD11C; p150 95 integrin alpha chain; SLEB6
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	BU15 (also known as BU-15; Bu-15)
Immunogen:	Human Synovial Fluid Dendritic Cells
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	III 256; V S143
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The BU15 monoclonal antibody specifically binds to CD11c, which is also known as Integrin alpha X (αX Integrin) or p150,95 Integrin alpha chain. CD11c is a ~150 kDa type I transmembrane glycoprotein that is encoded by *ITGAX* (Integrin subunit alpha X) which belongs to the integrin alpha chain family. It is variably expressed on monocytes, macrophages, granulocytes, NK cells, dendritic cells, and subsets of B and T cells. CD11c associates with CD18 (Integrin beta 2/β2 Integrin) to form the heterodimeric CD11c:CD18 complex, which is also known as p150,95 Integrin, or the Type 4 Complement Receptor (CR4). CD11c:CD18 binds to fibrinogen, iC3b, ICAM-1 (CD54), or lipopolysaccharide (LPS). CD11c:CD18 functions as an adhesion molecule that mediates cellular binding to ligands expressed on stimulated cells including epithelium and endothelium found during inflammation.

The antibody was conjugated to BD Horizon BB515 which is part of the BD Horizon Brilliant™ Blue family of dyes. With an Ex Max near 490 nm and an Em Max near 515 nm, BD Horizon BB515 can be excited by the blue laser (488 nm) laser and detected with a 530/30 nm filter. This dye has been exclusively developed by BD Biosciences and is up to seven times brighter than FITC with less spillover into the PE channel. Due to similar excitation and emission properties, BB515, FITC, and Alexa Fluor® 488 cannot be used simultaneously. It is not recommended to use BB515 in cocktails that include Streptavidin conjugates as it may cause high background.



Multiparameter flow cytometric analysis of CD11c expression on human peripheral blood leucocyte populations. *Human peripheral blood (collected with heparin as the preferred anticoagulant rather than EDTA) was stained with either BD Horizon™ BB515 Mouse IgG1, κ Isotype Control (Cat. No. 564416; Left Plot) or BD Horizon™ BB515 Mouse Anti-Human CD11c antibody (Cat. No. 566835; Right Plot) at 0.5 µg/test. The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). The two-parameter pseudocolor density plot showing the correlated expression of CD11c (or Ig Isotype control staining) versus side light scatter signals (SSC-A) was derived from gated events with the forward and side light-scatter characteristics of intact leucocyte populations. Flow cytometry and data analysis were performed using a BD LSRFortessa™ X-20 Cell Analyzer System and FlowJo™ software. Data shown in this Technical Data Sheet are not lot specific.*

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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™ BB515 under optimum conditions and unconjugated antibody was removed.

Application Notes

Application

Flow cytometry	Routinely Tested

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).

For optimal results, it is recommended to perform 2 washes after staining with antibodies. Cells may be prepared, stained with antibodies and washed twice with wash buffer per established protocols for immunofluorescence staining, prior to acquisition on a flow cytometer. Performing fewer than the recommended wash steps may lead to increased spread of the negative population.

Suggested Companion Products

Catalog Number	Name	Size	Clone
566349	Brilliant Stain Buffer	1000 Tests	(none)
566385	Brilliant Stain Buffer Plus	1000 Tests	(none)
564416	BB515 Mouse IgG1, κ Isotype Control	100 µg	X40
555899	Lysing Buffer	100 mL	(none)
349202	BD FACS™ Lysing Solution	100 mL	(none)
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
563794	Brilliant Stain Buffer	100 Tests	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. 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.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. 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.
6. Please refer to http://regdocs.bd.com to access safety data sheets (SDS).
7. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.

References

Luk J, Springer TA. CD11c cluster report. In: Schlossman SF. Stuart F. Schlossman .. et al., ed. *Leucocyte typing V : white cell differentiation antigens : proceedings of the fifth international workshop and conference held in Boston, USA, 3-7 November, 1993.* Oxford: Oxford University Press; 1995:1590-1592. (Clone-specific: Flow cytometry)

Zola H, Swart B, Nicholson I, Voss E. CD11c. In: Zola H. *Leukocyte and Stromal Cell Molecules : the CD Markers.* Hoboken, N.J.: Wiley-Liss; 2007:60. (Biology)

Hogg N. Human mononuclear phagocyte molecules and the use of monoclonal antibodies in their detection. *Clin Exp Immunol.* 1987; 69(3):687-694. (Clone-specific)

Hogg N, Horton MA. Myeloid antigens: New and previously defined clusters. In: McMichael AJ. A.J. McMichael .. et al., ed. *Leucocyte typing III : white cell differentiation antigens.* Oxford New York: Oxford University Press; 1987:576-602. (Clone-specific: Flow cytometry)