

# Technical Data Sheet

## BV711 Rat Anti-Mouse DCIR4 (Clec4a1)

### Product Information

Material Number:	751754
Size:	50 µg
Clone:	MH7E7
Alternative Name:	Clec4a1; DCIR4; Dcir4; dendritic cell inhibitory receptor 4
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat LEW, also known as Lewis IgG1, κ
Immunogen:	Mouse DCIR4
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

### Description

The MH7E7 monoclonal antibody specifically recognizes the extracellular domain of mouse Dendritic cell inhibitory receptor 4 (DCIR4). DCIR4 is a lectin receptor that is encoded by Clec4a1 (C-type lectin domain family 4, member α1) which belongs to the dendritic cell immunoreceptor (DCIR) family. DCIR4 (Clec4a1) is variably expressed on CD11b+ monocytes found in peripheral blood, secondary lymphoid tissues and the bone marrow. DCIR4 (Clec4a1) is reportedly expressed at low levels on Ly-6C-positive inflammatory monocytes and at high levels on Ly-6C-negative patrolling monocytes. It is not significantly expressed on eosinophils and neutrophils.

The antibody was conjugated to BD Horizon™ BV711 which is part of the BD Horizon Brilliant™ Violet family of dyes. This dye is a tandem fluorochrome of BD Horizon BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.

### 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	Clone
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
563283	BV711 Rat IgG1, κ Isotype Control	50 µg	R3-34
554656	Stain Buffer (FBS)	500 mL	

554657	Stain Buffer (BSA)	500 mL
563794	Brilliant Stain Buffer	100 Tests
555899	Lysing Buffer	100 mL
566349	Brilliant Stain Buffer	1000 Tests
566385	Brilliant Stain Buffer Plus	1000 Tests

## 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](http://www.bdbiosciences.com/colors).
6. Please refer to [www.bdbiosciences.com/us/s/resources](http://www.bdbiosciences.com/us/s/resources) for technical protocols.
7. 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.
8. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
9. Alexa Fluor® is a registered trademark of Life Technologies Corporation.
10. BD Horizon Brilliant Violet 711 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
11. Cy is a trademark of GE Healthcare.

## References

Flornes LM, Bryceson YT, Spurkland A, Lorentzen JC, Dissen E, Fossum S. Identification of lectin-like receptors expressed by antigen presenting cells and neutrophils and their mapping to a novel gene complex. *Immunogenetics*. 2004; 56(7):506-17. (Biology: Flow cytometry).

Hsu Y, Okada R, Nishimura T, Kawasaki N, Yamamoto K, Matsumoto N. DCIR3 and DCIR4 are co-expressed on inflammatory and patrolling monocytes. *Biochem Biophys Res Commun*. 2017; 494(3-4):440-445. (Clone-specific: Flow cytometry).

Kameda Y, Hanayama M, Kishimoto A, Kume M, Yamamoto K, Matsumoto N. Dendritic cell inhibitory receptor 4 (DCIR4) is preferentially expressed on inflammatory and patrolling monocytes. *Biochem Biophys Res Commun*. 2016; 480(2):215-221. (Immunogen: Flow cytometry).

## BD Biosciences

[bdbiosciences.com](http://bdbiosciences.com)

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



For country contact information, visit [bdbiosciences.com/contact](http://bdbiosciences.com/contact)

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for a patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited. For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

©2020 BD. All rights reserved. Unless otherwise noted, BD, the BD Logo and all other trademarks are the property of Becton, Dickinson and Company or its affiliates.