

# Technical Data Sheet

## BV711 Rat Anti-Mouse CD13

### Product Information

Material Number:	740695
Size:	50 µg
Clone:	R3-242
Alternative Name:	Anpep; Alanyl aminopeptidase; Aminopeptidase N; AP-N; mAPN; Lap-1
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat LEW, also known as Lewis IgG1
Immunogen:	Crude Aminopeptidase N Preparation from BALB/c Mouse Intestinal Epithelium
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

### Description

The R3-242 monoclonal antibody specifically binds to aminopeptidase N (APN), which has been reported to be the mouse CD13 homologue. APN is expressed in a variety of mammalian tissues, including intestinal and renal epithelial brush border, endothelium, liver, lung, and brain. In lymphoid tissues, R3-242 mAb is reported to detect APN on monocytes, macrophages, mast cells, dendritic cells, and B lymphocytes, but not on T cells, and thymocytes. However, the reported reactivity with B cells may be non-specific, via binding to the Fcγ receptors (CD16/CD32). This observation is in agreement with reports using different antibodies to mouse APN. APN may play a role in antigen presentation in the immune system. R3-242 mAb does not inhibit the enzymatic activity of APN.

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 Section

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 BV711 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
563283	BV711 Rat IgG1, κ Isotype Control RUO	50 µg	
554656	Stain Buffer (FBS) RUO	500 mL	
554657	Stain Buffer (BSA) RUO	500 mL	
563794	Brilliant Stain Buffer RUO	100 Tests	
555899	Lysing Buffer RUO	100 mL	
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) 2.4G2 RUO	0.1 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 [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
7. Please refer to [www.bdbiosciences.com/us/s/resources](http://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 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.
10. Cy is a trademark of Amersham Biosciences Limited.
11. Alexa Fluor® is a registered trademark of Life Technologies Corporation.

## References

Chen H, Kinzer CA, Paul WE. p161, a murine membrane protein expressed on mast cells and some macrophages, is mouse CD13/aminopeptidase N. *J Immunol.* 1996; 157(6):2593-2600.

Hansen AS, Noren O, Sjostrom H, Werdelin O. A mouse aminopeptidase N is a marker for antigen-presenting cells and appears to be co-expressed with major histocompatibility complex class II molecules. *Eur J Immunol.* 1993; 23(9):2358-2364.

Leenen PJ, Melis M, Kraal G, Hoogeveen AT, Van Ewijk W. The monoclonal antibody ER-BMDM1 recognizes a macrophage and dendritic cell differentiation antigen with aminopeptidase activity. *Eur J Immunol.* 1992; 22(6):1567-1572.

Pulendran B, Lingappa J, Kennedy MK, et al. Developmental pathways of dendritic cells in vivo: distinct function, phenotype, and localization of dendritic cell subsets in FLT3 ligand-treated mice. *J Immunol.* 1997; 159(5):2222-2231.

## 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.

