

Technical Data Sheet

R718 Mouse Anti-Human HLA-C

Product Information

Material Number:	751891
Size:	50 µg
Clone:	DT-9
Alternative Name:	HLAC; HLC-C; HLA-JY3; MHC class I antigen C; PSORS1; HLA-E
Reactivity:	Tested in Development: Human
Isotype:	Mouse 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 DT-9 monoclonal antibody specifically recognizes Human Leukocyte Antigen (HLA-C), a polymorphic major histocompatibility complex (MHC) class I antigen. HLA-C is a heterodimer comprised of the HLA-C alpha chain, a ~45 kDa type I transmembrane glycoprotein, and a ~12 kDa Beta-2 (β2)-microglobulin light chain. HLA-C is expressed on nearly all cells, and plays a role in the antigen-specific, MHC-restricted presentation of small peptides to CD8+ T cells in the generation of immunity or tolerance. HLA-C may also bind to regulatory MHC class I antigen-selective receptors expressed by CD8+ T cells and natural killer (NK) cells. The DT-9 antibody also recognizes some rare HLA-A and HLA-B allotypes and the nonclassical HLA-E molecule.

The antibody was conjugated to BD Horizon Red 718, which has been developed exclusively for BD Biosciences as a better alternative to Alexa Fluor® 700. BD Horizon Red 718 can be excited by the red laser (628 – 640 nm) and, with an Em Max around 718 nm, it can be detected using a 730/45 nm filter. Due to similar excitation and emission properties, we do not recommend using R718 in combination with APC-R700 or Alexa Fluor® 700.

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 BD 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 BD CompBead to ensure that BD CompBeads are appropriate for your specific cellular application.

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
555899	Lysing Buffer	100 mL
349202	Lysing Solution 10X Concentrate	100 mL
566952	R718 Mouse IgG2b, κ Isotype Control	50 µg

Product Notices

1. Researchers should determine the optimal concentration of this reagent for their individual applications.

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. 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. Alexa Fluor® is a registered trademark of Life Technologies Corporation.
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.
8. This product is provided under an Agreement between Biotium and BD Biosciences. This product, and only in the amount purchased by buyer, may be used solely for buyer's own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. This product is for research use only. Diagnostic uses require a separate license from Biotium, Inc. For information on purchasing a license to this product including for purposes other than research, contact Biotium, Inc., 3159 Corporate Place, Hayward, CA 94545, Tel: (510) 265-1027. Fax: (510) 265-1352. Email: btinfo@biotium.com.

References

Apps R, Qi Y, Carlson JM, et al. Influence of HLA-C expression level on HIV control.. *Science*. 2013; 340(6128):87-91. (Clone-specific: Flow cytometry).

Corrah TW, Goonetilleke N, Kopycinski J, et al. Reappraisal of the relationship between the HIV-1-protective single-nucleotide polymorphism 35 kilobases upstream of the HLA-C gene and surface HLA-C expression.. *J Virol*. 2011; 85(7):3367-74. (Clone-specific: Flow cytometry).

Thomas R, Apps R, Qi Y, et al. HLA-C cell surface expression and control of HIV/AIDS correlate with a variant upstream of HLA-C.. *Nat Genet*. 2009; 41(12):1290-4. (Clone-specific: Flow cytometry).

Braud VM, Allan DS, O'Callaghan CA, et al. HLA-E binds to natural killer cell receptors CD94/NKG2A, B and C.. *Nature*. 1998; 391(6669):795-9. (Clone-specific: Flow cytometry).

Braud VM, Allan DS, Wilson D, McMichael AJ. TAP- and tapasin-dependent HLA-E surface expression correlates with the binding of an MHC class I leader peptide.. *Curr Biol*. 1998; 8(1):1-10. (Immunogen: Flow cytometry, Immunoprecipitation).

Zipeto D, Beretta A. HLA-C and HIV-1: friends or foes?. *Retrovirology*. 2012; 9:39. (Biology).

BD Biosciences

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

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

©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.