Technical Data Sheet

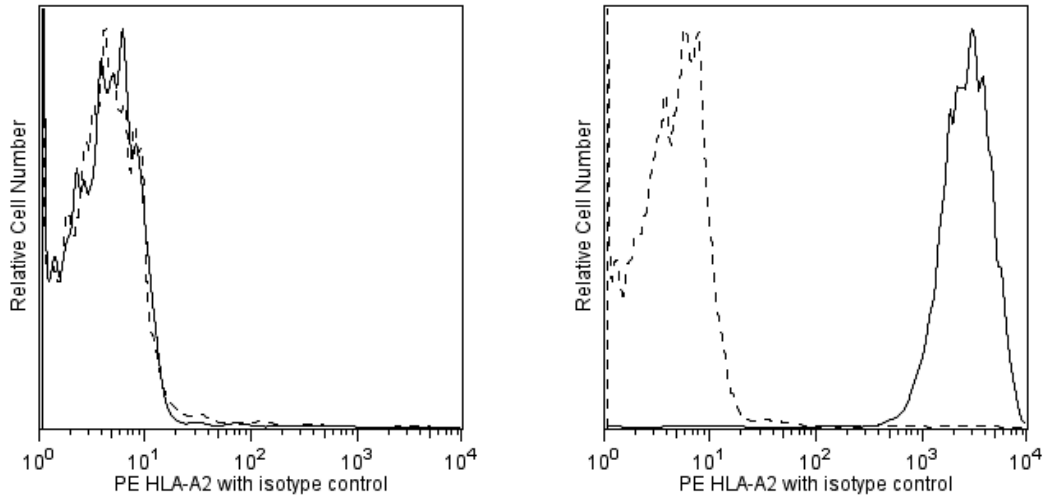
PE Mouse anti-Human HLA-A2

Product Information

Material Number:	**558570**
Size:	100 tests
Vol. per Test:	20 µl
Clone:	BB7.2
Isotype:	Mouse IgG2b, κ
Reactivity:	Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The monoclonal antibody BB7.2 specifically binds to the α subunit of the human leukocyte antigen-A2 (HLA-A2), a class I molecule of the major histocompatibility complex (MHC). The MHC gene locus encodes a group of highly polymorphic, cell-surface proteins that play a broad role in the immune response to protein antigens. MHC molecules function by binding and presenting small antigenic protein fragments to antigen-specific receptors expressed by T cells (TCR). Human (*human leukocyte antigen*/HLA) MHC molecules comprise two major classes, MHC class I and class II. Functionally, class I MHC molecules can bind peptides derived from intracellular antigens (eg, viral and some bacterial antigens) that are specifically recognized by CD8+ T cells, and class II MHC molecules recognize antigens derived from pathogens multiplying in intracellular vesicles, and those derived from ingested extracellular bacteria. When presented on the cell surface by the MHC class II molecules, these antigens are recognized by CD4+ T cells. TCR recognize both processed peptides bound to MHC, as well as regions of the MHC molecule itself. CD4 and CD8 accessory molecules strengthen formation of the TCR-MHC complex through their interaction with non-polymorphic regions of the MHC molecule.



Expression of PE anti-human HLA-A2 on lymphocytes from positive and negative donors
Human lymphocytes from either a positive or a negative donor were stained with PE anti-human HLA-A2 (clone: BB7.2; Cat. No. 558570) and compared to an isotype control (Cat. No. 555743). The overlay histograms show the HLA-A2 present on lymphocytes from the positive donor (right panel; solid line), but not on lymphocytes from a negative donor (left panel; solid line). In both figures, the isotype control is represented by the dashed line. Flow cytometry was performed on a BD FACSCalibur™ flow system.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

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Application Notes

Application

Flow cytometry	Routinely Tested
Blocking	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
555743	PE Mouse IgG2b κ Isotype Control	100 tests	27-35

Product Notices

1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
2. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.

References

Bjorkman PJ, Saper MA, Samraoui B, Bennett WS, Strominger JL, Wiley DC. Structure of the human class I histocompatibility antigen, HLA-A2. *Nature.* 1987; 329(6139):506-512. (Biology)

Brenner MB, McLean J, Yang SY, van der Poel JJ, Pious D, Strominger JL. Clonal T lymphocyte recognition of the fine structure of the HLA-A2 molecule. *J Immunol.* 1985; 135(1):384-390. (Biology)

Brodsky FM, Parham P, Barnstable CJ, Crumpton MJ, Bodmer WF. Monoclonal antibodies for analysis of the HLA system. *Immunol Rev.* 1979; 47:3-6. (Biology)