Technical Data Sheet

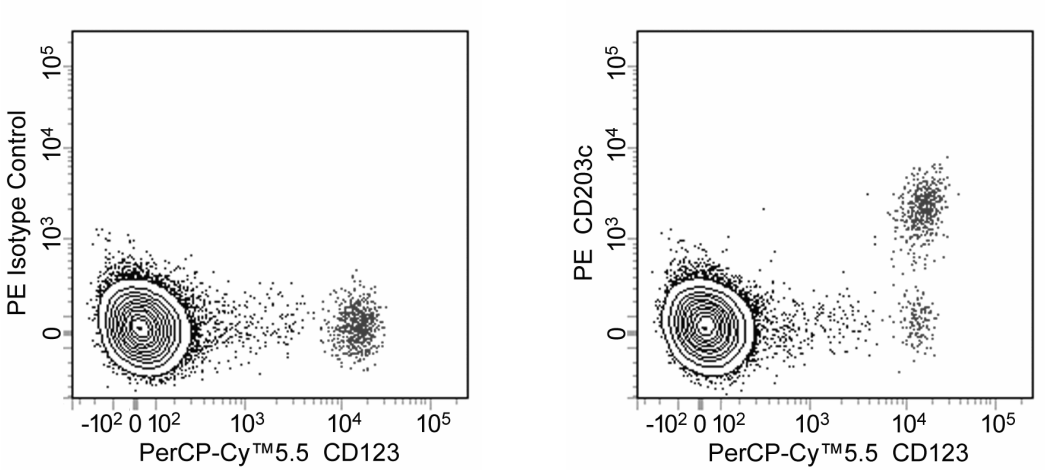
PE Mouse anti-Human CD203c

Product Information

Material Number:	**562972**
Alternate Name:	ENPP3; E-NPP 3; NPP3; PDNP3; PD-Ibeta; PD-1β; B10; NPPase; gp130RB13-6
Size:	50 Tests
Vol. per Test:	5 µl
Clone:	NP4D6
Immunogen:	Human CD203c Transfected Cell Line
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The NP4D6 monoclonal antibody specifically binds to CD203c. CD203c is a type II transmembrane glycoprotein that is a member of the E-NNP family of ectoenzymes. CD203c is also known as ectonucleotide pyrophosphatase/phosphodiesterase 3 (E-NPP3, ENPP3) due to its capacity to hydrolyze phosphodiester and phosphosulfate bonds in a variety of molecules including deoxynucleotides, nucleoside phosphates, and nicotinamide adenine dinucleotide. CD203c is otherwise known as Phosphodiesterase-1β (PD-1β, PD-I beta), B10, or gp130RB13-6. CD203c is expressed by basophils and mast cells. Basophils increase CD203c expression following activation with allergens or antibodies that crosslink cytophilic IgE. Thus, CD203c serves as a useful flow cytometric marker for basophil activation and the detection and analysis of type 1 allergic responses. IgE-receptor cross-linking results in CD203c upregulation and overexpression on neoplastic mast cells in cases of systemic mastocytosis.



Multicolor flow cytometric analysis of CD203c expression on human peripheral blood cells. *Human whole blood was stained with Mouse PerCP-Cy™5.5 Anti-Human CD123 antibody (Cat. No. 560904/558714) and either PE Mouse IgG1 κ Isotype Control (Cat. No. 554680; Left Panel) or PE Mouse Anti-Human CD203c antibody (Cat. No. 562972; Right Panel). Whole blood samples were then treated with BD FACS™ Lysing Solution (Cat. No. 349202) to lyse erythrocytes and fix the remaining leucocytes. The two-color flow cytometric dot plots show the correlated expression patterns of CD123 versus CD203c (or Ig Isotype control staining) for gated events with the forward and side-light scattering characteristics of intact lymphoid cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System. A target acquisition of at least 500 events with low side-light scatter characteristics and bright CD123 expression were included.*

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 R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
349202	BD FACS™ Lysing Solution	100 mL	(none)
554656	Stain Buffer (FBS)	500 mL	(none)
554680	PE Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21
560904	PerCP-Cy™5.5 Mouse Anti-Human CD123	25 Tests	7G3
558714	PerCP-Cy™5.5 Mouse anti-Human CD123	100 Tests	7G3

Product Notices

1. 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).
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Cy is a trademark of Amersham Biosciences Limited.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. 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.
7. An isotype control should be used at the same concentration as the antibody of interest.

References

Binder M, Fierlbeck G, King T, Valent P, Buhring HJ. Individual hymenoptera venom compounds induce upregulation of the basophil activation marker ectonucleotide pyrophosphatase/phosphodiesterase 3 (CD203c) in sensitized patients. *Int Arch Allergy Immunol.* 2002; 129(2):160-168. (Clone-specific: Flow cytometry)

Buhring HJ, Streble A, Valent P. The basophil-specific ectoenzyme E-NPP3 (CD203c) as a marker for cell activation and allergy diagnosis. *Int Arch Allergy Immunol.* 2004; 133(4):317-329. (Clone-specific: Flow cytometry)

Fureder W, Schernthaner GH, Ghannadan M, et al. Quantitative, phenotypic, and functional evaluation of basophils in myelodysplastic syndromes. *Eur J Clin Invest.* 2001; 31(10):894-901. (Biology)

Ghannadan M, Hauswirth AW, Schernthaner GH, et al. Detection of novel CD antigens on the surface of human mast cells and basophils. *Int Arch Allergy Immunol.* 2002; 127(4):299-307. (Clone-specific: Immunofluorescence)

Hauswirth AW, Natter S, Ghannadan M, et al. Recombinant allergens promote expression of CD203c on basophils in sensitized individuals. *J Allergy Clin Immunol.* 2002; 110(1):102-109. (Clone-specific: Flow cytometry)

Hauswirth AW, Sonneck K, Florian S, et al. Interleukin-3 promotes the expression of E-NPP3/CD203C on human blood basophils in healthy subjects and in patients with birch pollen allergy. *Int J Immunopathol Pharmacol.* 2007; 20(2):267-278. (Biology)

Hennersdorf F, Florian S, Jakob A, et al.. Identification of CD13, CD107a, and CD164 as novel basophil-activation markers and dissection of two response patterns in time kinetics of IgE-dependent upregulation. *Cell Res.* 2005; 15(5):325-335. (Biology: Flow cytometry)

Iwamoto T, Yuta A, Tabata T, et al. Evaluation of basophil CD203c as a predictor of carboplatin-related hypersensitivity reaction in patients with gynecologic cancer. *Biol Pharm Bull.* 2012; 35(9):1487-1495. (Biology)

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