

Technical Data Sheet

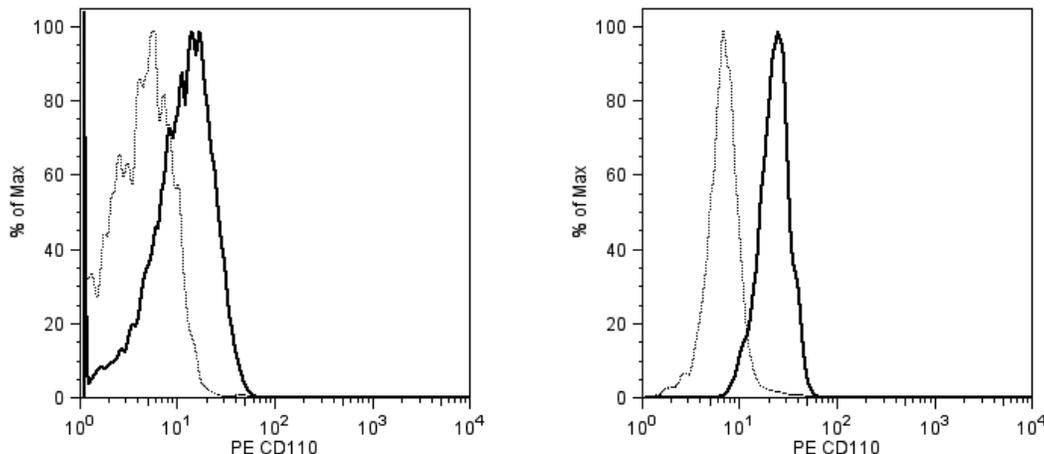
PE Mouse anti-Human CD110

Product Information

Material Number:	562159
Alternate Name:	C-MPL; MPL; MPLV; TPOR; Thrombopoietin receptor
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	1.6.1
Isotype:	Mouse IgG2b, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and $\leq 0.09\%$ sodium azide.

Description

The 1.6.1 monoclonal antibody specifically binds to the human Thrombopoietin Receptor (TPO-R) that is also known as the Myeloproliferative leukemia protein (c-Mpl) or CD110. CD110 is a type I transmembrane protein and a member of the hematopoietin receptor family. It is expressed on hematopoietic stem cells, a subfraction of hematopoietic precursor cells, cells of the megakaryocytic lineage and platelets. CD110 serves as a receptor for thrombopoietin. Upon binding of thrombopoietin to CD110, megakaryocyte proliferation and differentiation is induced and stem cells are protected from apoptosis.



Flow cytometric analysis of human CD110 expression on platelets and HEL92.1.7 cells. Platelets (Left Panel) and HEL92.1.7 cells (Right Panel) were stained with either PE Mouse IgG2b Isotype Control (Cat. No. 555743; dashed line histogram) or PE Mouse anti-Human CD110 (Cat. No. 562159; solid line histogram). Flow cytometric fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of platelets or viable HEL92.1.7 cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.

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
555743	PE Mouse IgG2b κ Isotype Control	100 tests	27-35
554656	Stain Buffer (FBS)	500 ml	(none)

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. 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.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
5. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

Abbott C, Huang G, Wei P, et al. Mouse monoclonal antibodies against human c-Mpl and characterization for flow cytometry applications. *Hybridoma*. 2010; 29(2):103-113. (Clone-specific: Flow cytometry)

Broudy VC, Lin NL, Fox N, Taga T, Saito M, Kaushansky K. Thrombopoietin stimulates colony-forming unit-megakaryocyte proliferation and megakaryocyte maturation independently of cytokines that signal through the gp130 receptor subunit. *Blood*. 1996; 88(6):2026-2032. (Biology)

Deng B, Banu N, Malloy B. An agonist murine monoclonal antibody to the human c-Mpl receptor stimulates megakaryocytopoiesis. *Blood*. 1998; 92(6):1981-1988. (Biology)

Fox NE, Lim J, Chen R, Geddis AE. F104S c-Mpl responds to a transmembrane domain-binding thrombopoietin receptor agonist: proof of concept that selected receptor mutations in congenital amegakaryocytic thrombocytopenia can be stimulated with alternative thrombopoietic agents. *Exp Hematol*. 2010; 38(5):384-391. (Clone-specific: Flow cytometry)

Gotoh A, Ritchie A, Takahira H, Broxmeyer HE. Thrombopoietin and erythropoietin activate inside-out signaling of integrin and enhance adhesion to immobilized fibronectin in human growth-factor-dependent hematopoietic cells. *Ann Hematol*. 1997; 75(5-6):207-213. (Biology)

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