

Technical Data Sheet

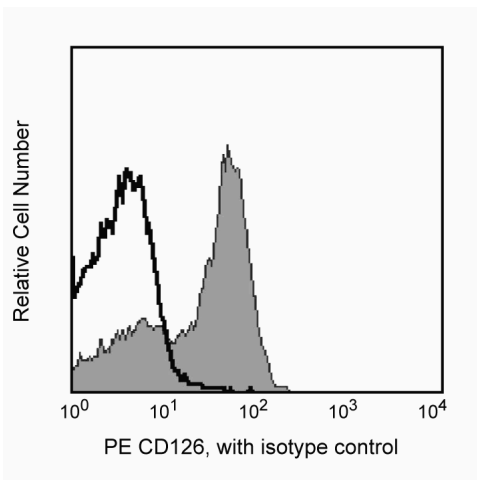
PE Mouse Anti-Human CD126

Product Information

Material Number:	561696
Alternate Name:	Interleukin 6 Receptor alpha chain; IL-6R alpha; IL-6R α
Size:	25 Tests
Vol. per Test:	20 μ l
Clone:	M5
Immunogen:	CD126 Recombinant Protein
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	VI C63; IX 36
Storage Buffer:	Aqueous buffered solution containing BSA and \leq 0.09% sodium azide.

Description

The M5 monoclonal antibody specifically binds to human CD126 which is also known as the alpha subunit of the human IL-6 Receptor (IL-6R α). CD126 is an 80 kDa type I transmembrane glycoprotein, also known as gp80 and B cell stimulatory factor-2 (BSF-2) Receptor. The IL-6R α subunit associates with the 130-160 kDa gp130 subunit (IL-6 Receptor β chain, CD130), that is shared with the receptor complexes for Leukemia Inhibitory Factor (LIF), Ciliary Neurotropic Factor (CNTF), Oncostatin M (OSM), IL-11, Cardiotropin 1 (CT-1) and possibly Neurotrophin-1/B Cell-Stimulating Factor 3 (NNT-1/BSF-3). The IL-6R α chain binds IL-6 with low affinity; however the association with CD130 stabilizes the IL-6/IL-6R α complex resulting in the formation of a high affinity ligand-receptor complex. The IL-6R β chain mediates signal transduction. CD126 is expressed at high levels by activated and EBV-transformed B cells, plasma cells and myeloma cells and at lower levels by most leucocytes, epithelial cells, fibroblasts, hepatocytes and neural cells. IL-6R α exists in soluble form in human serum. The serum levels of soluble IL-6R α appear to elevate in pathological situations such as multiple myeloma, Grave's disease, juvenile chronic arthritis and HIV. The M5 antibody is directed against an epitope not involved in interactions of CD126 with IL-6 or CD130.

**Expression of cell surface IL-6R by human PBMC.**

Human PBMC isolated by density centrifugation (Ficoll-Paque™) were blocked with normal polyclonal human IgG and stained with PE Mouse Anti-Human CD126 (Cat. No. 561656/551850; filled histogram) or PE Mouse IgG1, κ Isotype Control (Cat. No. 555749; open histogram). Histograms in the figure were gated on the CD19-negative lymphocytes. Note: Certain human cell lines or cell types (e.g., neutrophils, monocytes) can first be treated with reagents that block receptors for the Fc regions of immunoglobulin to avoid nonspecific immunofluorescent staining mediated by Fc receptors.

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

Recommended Assay Procedure:

Immunofluorescent Staining and Flow Cytometric Analysis: The PE Mouse Anti-Human CD126 (Cat. No. 561696/551850) antibody can be used for immunofluorescent staining (20 μ g/10e6 cells) and flow cytometric analysis of human nucleated cells to measure their expressed levels of surface IL-6R α . An appropriate immunoglobulin isotype control is PE Mouse IgG1, κ Isotype Control (Cat. No. 555749).

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561696 Rev. 2



ELISA: The Purified Mouse Anti-Human CD126 antibody (Cat. No. 551462) is useful as a capture for a sandwich ELISA that measures soluble human IL-6R α protein levels. The M5 antibody can be paired with the M182 antibody and recombinant soluble human IL-6R α as a standard.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
555749	PE Mouse IgG1, κ Isotype Control	100 Tests	MOPC-21
554657	Stain Buffer (BSA)	500 mL	(none)
551850	PE Mouse Anti-Human CD126	100 Tests	M5

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- μ l experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
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. Ficoll-Paque is a trademark of Amersham Biosciences Limited.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.

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