Technical Data Sheet

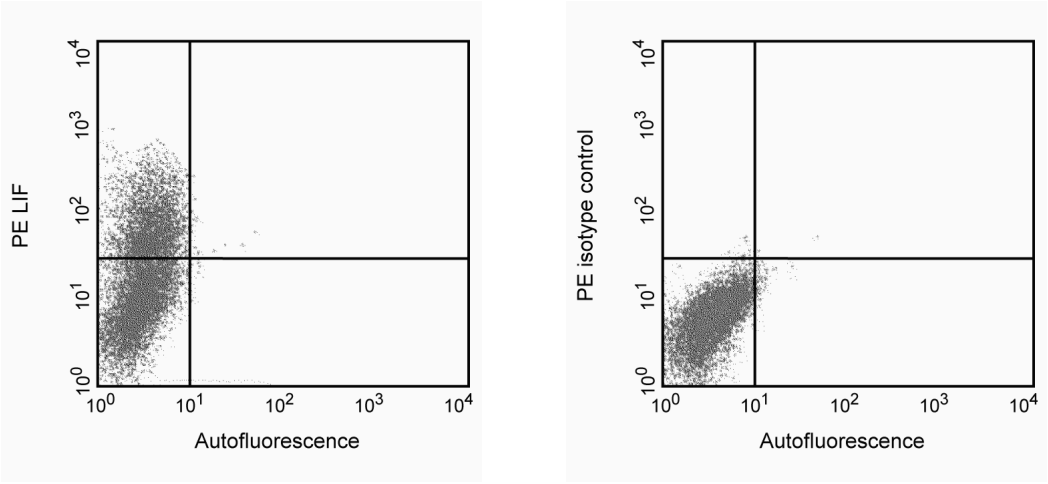
PE Mouse Anti-Human Leukemia Inhibitory Factor

Product Information

Material Number:	**558571**
Alternate Name:	MLPLI; HILDA; HSF III
Size:	100 tests
Vol. per Test:	20 µl
Clone:	1F10
Immunogen:	Recombinant vaccinia virus
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 1F10 antibody specifically binds to human Leukemia Inhibitory Factor (LIF) also known as Human Interleukin for DA cells (HILDA), Melanoma-derived Lipoprotein Lipase Inhibitor (MLPLI) and Hepatocyte Stimulating Factor III (HSF III). LIF is produced by multiple sources including activated T cells and macrophages, myelomonocytic lineages, fibroblasts, liver, heart and melanoma cells. LIF regulates the differentiation of embryonic stem cells, neural cells, osteoblasts, adipocytes, hepatocytes and kidney epithelial cells. Other activities include terminal differentiation in leukemic cells and the stimulation of acute-phase protein synthesis in hepatocytes. Many of its biological functions parallel those of Interleukin-6, Oncostatin M, Ciliary Neurotrophic Factor, Interleukin-11 and Cardiotrophin-1. In vivo LIF is important in regulating the inflammatory response by tuning the balance of four systems in the body, namely the immune, the haematopoietic, the nervous and the endocrine systems. The immunogen used to generate the 1F10 hybridoma was recombinant vaccinia virus encoding the human LIF cytokine. The LIF cytokine had been engineered to get expressed on the membrane of the infected cell. The attachment to the membrane was obtained with the glycosylphoshosphatidyl anchor targeting DNA sequence from the DAF molecule (CD55).



Expression of intracellular LIF by in-vitro-activated human peripheral blood cells. *Human peripheral blood mononuclear cells (HPBMC) isolated by density gradient centrifugation (Ficoll-Paque™) were stimulated with plate-bound anti-human CD3 antibody (10 µg/ml, Cat. No. 555336) and soluble anti-CD28 antibody (2 µg/ml, Cat. No. 555725) in the presence of human IL-2 (10 ng/ml, Cat. No. 554603) and IL-4 (40 ng/ml, Cat. No. 554605) for 2 days. The cells were subsequently washed and expanded in IL-2 and IL-4 for 3 days. Following expansion, the cells were washed and stimulated for 5 hrs with PMA (5 ng/ml) and ionomycin (500 ng/ml) in the presence of BD GolgiPlug™ (Cat. No. 555029). Following incubation, the cells were harvested, washed and fixed with BD Cytofix/Cytoperm™ Solution (Cat. No. 554722, 15 min, 4°C). The intracellular levels of LIF expressed by activated HPBMC were detected by immunofluorescent staining and flow cytometric analysis using the PE-conjugated 1F10 antibody (left panel, 20 µl/10e6 cells, Cat. No. 558571) or an immunoglobulin isotype control (right panel). Dot plots (left and right panels) were derived from gated events with the forward- and side- light scatter characteristics of mononuclear cells.*

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.

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Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
559320	PE Mouse IgG1, κ Isotype Control	100 tests	MOPC-21
554722	Fixation and Permeabilization Solution	125 ml	(none)
554656	Stain Buffer (FBS)	500 ml	(none)

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. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
4. Ficoll-Paque is a trademark of Amersham Biosciences Limited.
5. 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.
6. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. An isotype control should be used at the same concentration as the antibody of interest.

References

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