Technical Data Sheet

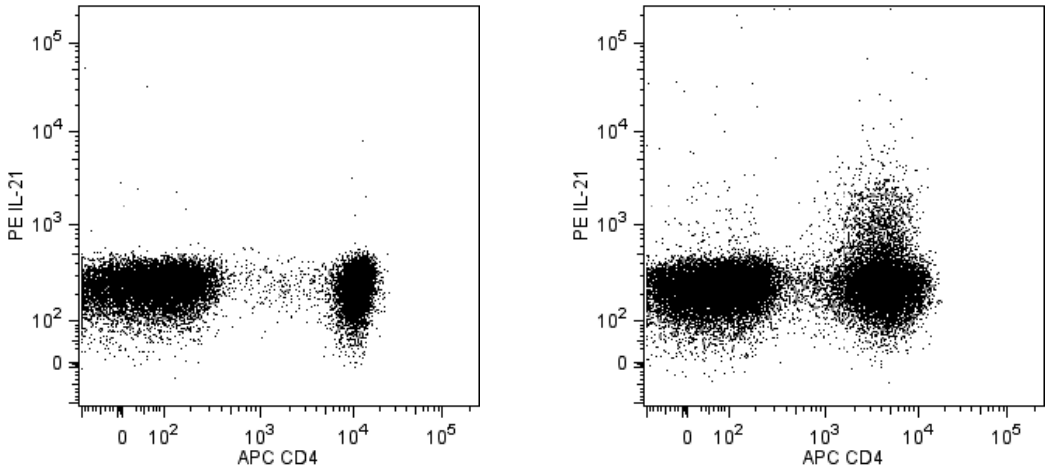
PE Mouse anti-Human IL-21

Product Information

Material Number:	**560463**
Alternate Name:	Interleukin-21, IL21, Za11
Size:	100 tests
Vol. per Test:	20 µl
Clone:	3A3-N2.1
Immunogen:	Human
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

Human Interleukin-21 (IL-21) is a member of the type I cytokine family that is encoded by a gene resident on chromosome 4. The mature form of human IL-21 is a 131 amino acid protein. IL-21 is produced by activated NKT and multiple CD4+ T cell subsets including effector memory and central memory CD4+ T cells and differentiated T helper cell subsets polarized towards Th17 cell and T follicular helper (Tfh) phenotypes. IL-21 plays important protective roles in the regulation of hematopoiesis and both innate and adaptive immune responses and adverse roles in promoting autoimmunity. IL-21 costimulates the proliferation and differentiation of CD4+ T cells. It enhances the proliferation of and cytotoxicity mediated by natural killer (NK) cells and CD8+ T cells. IL-21 costimulates B cell proliferation and differentiation into plasma cells producing immunoglobulins with IgG isotypes. IL-21 can also regulate the functions of dendritic cells and other myeloid cells. IL-21 exerts its biological activities by binding to and activating the Janus activating kinases (JAK1 and JAK3) and signal transducers and activators of transcription (STAT1, STAT3, STA5a and STAT5b) signaling pathways through the IL-21 receptor (IL-21R) complex. The IL-21R complex is comprised of the IL-21R alpha subunit and the common cytokine receptor gamma subunit (γ c; CD132).
The monoclonal 3A3-N2 antibody specifically binds to human IL-21.



Flow cytometric analysis of PE anti-human IL-21 on stimulated and non-stimulated PBMC. Human PBMC were cultured with media alone (left panel) or stimulated with PMA/Ionomycin in the presence of BD GolgiStop™ (Cat. No. 554724) for 5 hours (right panel). Cells were then fixed with BD Cytofix™ Fixation Buffer (Cat. No. 554655), and stored in BD Pharmingen™ Stain Buffer (FBS) (Cat. No. 554656) at 4°C overnight. The cells were then permeabilized using BD Perm/Wash™ Perm/Wash Buffer (Cat. No. 554723) followed by staining with APC Mouse Anti-Human CD4 (clone RPA-T4, Cat. No. 555349) and PE anti-human IL-21. The dot plots were derived from gated lymphocytes. Flow cytometry was performed on a BD FACSCanto™ 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

Intracellular staining (flow cytometry)	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
555349	APC Mouse Anti-Human CD4	100 tests	RPA-T4
554724	Protein Transport Inhibitor (Containing Monensin)	0.7 ml	(none)
554655	Fixation Buffer	100 ml	(none)
554656	Stain Buffer (FBS)	500 ml	(none)
554723	Perm/Wash Buffer	100 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. 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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.

References

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