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AM39036RP-N Monoclonal Antibody to Interleukin-10 / IL10 - PE

Alternate names: CSIF, Cytokine synthesis inhibitory factor, IL-10, TGIF

Quantity: 100 Tests

Concentration: AM39036FC-N anti-IL-10 FITC: 100 Tests / ml
AM39036RP-N anti-IL-10 PE: 100 Tests / ml

Background: The immune system reacts to a pathogen by activation of balanced network of the humoral and cellular immune responses. Subsequently the activated condition of the immune system will, after the elimination of the pathogen, be down-regulated to a balanced situation again. Control of the immune response requires efficient communication between the different cells involved in this response. This interaction is provided by cell/cell contact and by a complex array of mediators. Among these mediators cytokines, soluble factors produced by these cells, play an important role. Cytokines can act on other cells locally or distantly, but can be even auto regulating. Cytokines can behave stimulatory or inhibitory, or can even perform both activities, depending on the (pre)activation stage of the target cell. (3, 4)
Interleukin 10 (IL-10) belongs to the group of cytokines produced by TH2 cells and monocytes. It plays a role in B cell proliferation and antibody responses.

Uniprot ID: P22301

NCBI: NP_000563

GeneID: 3586

Host / Isotype: Mouse / IgG1

Recommended Isotype Controls: SM10R (for use in human samples)

Clone: BN-10

Format: **State:** Liquid purified Ig fraction
Purification: Affinity chromatography
Buffer System: 0.01 M sodium phosphate, 0.15 M NaCl, pH 7.3, 0.2% BSA, 0.09% sodium azide
Label: PE – **Cat. No. /Label EX-max (nm) / EM-max (nm):**
AM39036FC-N / FITC 488 / 519
AM39036RP-N / PE 488, 532 / 578

Applications: **Flow cytometry:** 10 µl of antibody solution for 10^6 leucocytes.
The clone is also suitable for **IHC** (frozen tissue).
Please note:
The level of most of the cytokines produced by immune unstimulated cells is too low to be detected by flow cytometry analysis. (19)
After stimulation the level of cytokines is rising and depending on the way of stimulation, the cell population, the secretion inhibitor that is used and several other factors several cytokines are upregulated and in detectable concentrations present. Therefore, a method comprising cell stimulation, fixation and permeabilization should be used to make detection of the intracellularly expressed cytokines possible.

Fluorochrome-labelled antibodies are effectively formulated for direct immunofluorescent staining of human cells.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: The antibody detects Interleukin 10, which is 18 kDa in size and belongs to the group of cytokines produced by activated human TH2 cells, monocytes and macrophages.
Other species not tested.

Add. Information: 1. Conjugates with brighter fluorochromes, like PE and APC, will have a greater separation than those with dyes like FITC. When populations overlap, the percentage of positive cells using a selected marker can be affected by the choice of fluorescent label.
2. Use of monoclonal antibodies in patient treatment can interfere with antigen target recognition by this reagent. This should be taken into account when samples are analyzed from patients treated in this fashion.
3. Reagent data performance is based on EDTA-treated blood. Reagent performance can be affected by the use of other anticoagulants.

Storage: Store the antibody undiluted at 2-8°C.
Fluorochrome labelled product is photosensitive and should be protected from light.
Shelf life: one year from despatch.

General Readings:

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17. Sousa AE, Chaves AF, Doroana M, Antunes F, Victorino RM. Kinetics of the changes of lymphocyte subsets defined by cytokine production at single cell level during highly active antiretroviral therapy for HIV-1 infection. J Immunol. 1999 Mar 15;162(6):3718-26. PubMed PMID: 10092835.
18. Betts MR, Ambrozak DR, Douek DC, Bonhoeffer S, Brenchley JM, Casazza JP, et al. Analysis of total human immunodeficiency virus (HIV)-specific CD4(+) and CD8(+) T-cell responses: relationship to viral load in untreated HIV infection. J Virol. 2001 Dec;75(24):11983-91. PubMed PMID: 11711588.
19. Rostaing L, Tkaczuk J, Durand M, Peres C, Durand D, de Préval C, et al. Kinetics of intracytoplasmic Th1 and Th2 cytokine production assessed by flow cytometry following in vitro activation of peripheral blood mononuclear cells. Cytometry. 1999 Apr 1;35(4):318-28. PubMed PMID: 10213197.

Pictures:

Representative Data Clone B-N10 (anti-IL-10) was analyzed by flow cytometry: Peripheral blood (lymphocytes) were isolated from a blood sample obtained from a healthy volunteer and subsequently activated, fixed and permeabilized. Direct staining was performed using 10 µl of PE-conjugated monoclonal antibody in combination with 10 µl of anti-CD45 FITC per sample.