

Anti-IL-6 Monoclonal Antibody

Catalog Number: M00102-1

Introduction

CD3epsilon is a 20kD chain, which together with CD3lambda, CD3delta, and CD3zeta, and a T cell receptor (alpha/beta or gamma/delta) form the CD3/T-cell receptor complex. It is a specific marker for T lymphocytes, NK T cells, and some thymocytes. Crosslinking of TCR initiates an intracellular signaling cascade resulting in cellular activation and proliferation. The OKT3 antibody has been reported to have potent immunosuppressive properties in vivo and has been proved effective in the treatment of renal, heart, and liver allograft rejection.

This antibody is routinely tested by flow cytometric analysis. Flow cytometry and other applications were tested during antibody development or are reported in the literature.

Application Information

Each lot of this antibody has been pre-titrated and tested by flow cytometric analysis of human PBMCs such that 2-5µl of this product is sufficient for staining of 1 million cells in a 100µl staining volume or 100µl of whole blood. This biotin conjugated antibody can be easily detected by any fluorochrome conjugated streptavidin. It is recommended that antibody reactivity be empirically titrated for optimal performance in the application of interest.

About IL6

IL-6 is a secreted cytokine with a wide variety of biological functions. It is a potent inducer of the acute phase response and plays an essential role in the final differentiation of B-cells into Ig-secreting cells. Involved in lymphocyte and monocyte differentiation. IL-6 induces myeloma and plasmacytoma growth and induces nerve cells differentiation and acts on B-cells, T-cells, hepatocytes, hematopoietic progenitor cells and cells of the CNS. IL-6 also acts as a myokine. It is discharged into the bloodstream after muscle contraction and acts to increase the breakdown of fats and to improve insulin resistance. Anti-IL-6 antibody is ideal for investigators involved in Cancer, Neuroscience and Immunology research.

Overview

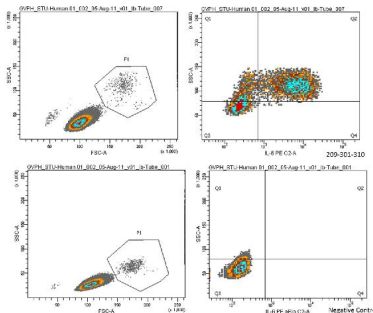
Product Name	Anti-IL-6 Monoclonal Antibody
Reactive Species	Human
Description	Boster Bio Anti-IL-6 Monoclonal Antibody (Catalog # M00102-1). Tested in ELISA, Flow Cytometry, WB applications. This antibody reacts with Human.
Conjugate	HRP
Application	ELISA, Flow Cytometry, WB
Clonality	Monoclonal Clone: 33A12.G9
Formulation	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2, 0.01% (w/v) Sodium Azide
Storage Instructions	Store IL 6 antibody at -20°C. For extended storage aliquot contents and freeze at -20°C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4°C as an undiluted liquid. Dilute only

	prior to immediate use. Expiration date is one (1) year from date of opening.
Host	Mouse
Uniprot ID	P05231

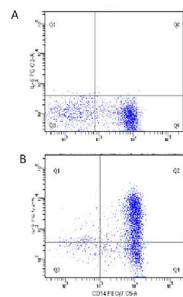
Technical Details

Immunogen	This Protein A purified IL-6 monoclonal antibody was produced in mouse by repeated immunizations with mature full length recombinant human IL-6 produced in E.coli followed by hybridoma development.
Predicted Reactive Species	Bovine, Mammalian
Cross Reactivity	Weakly cross-reacts with human PDGF receptor beta.
Isotype	IgG1 kappa
Form	Liquid (sterile filtered)
Concentration	1.0 mg/mL by UV absorbance at 280 nm
Purification	This purified antibody detects recombinant and native IL-6 present in body fluids and cell supernatants in various assays (ie. IL-1 stimulated IL-6 production from fibroblasts). In Western blot analysis of natural cell products or human body fluids, multiple bands of IL-6 will appear due to the variable amount of glycosylation on the molecule.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>ELISA: 1:10,000</p> <p>Flow Cytometry: 0.5 mg/mL</p> <p>WB: 1:1000</p>

Anti-IL-6 Monoclonal Antibody (M00102-1) Images



Anti-Human IL-6 Antibody -Flow Cytometry Human PBMCs were stimulated with 1ug/mL LPS and a transport inhibitor for 4-5 hours. Cells were then suspended in fixation buffer for 10-12 minutes and vortexed briefly. 1mL of permeabilization buffer was added. 0.5mg of Anti-Human IL-6 Antibody was added (0.125 ug/mL control antibody) and incubated in the dark for 30 minutes. 1:100 of strep/PE was added and incubated for 30 minutes. LPS-stimulated samples were compared to unstimulated cells stained with strep/PE.



Flow Cytometry of Human anti-IL-6 antibody M00102-1 Cells: human PBMC Stimulation: Figure A: un-stimulated, Figure B: 1

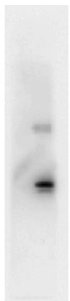


Figure 2. Western blot analysis of IL6 using anti-IL6 antibody (M00102-1).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-IL6 antigen affinity purified polyclonal antibody (Catalog # M00102-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with a goat anti-Mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # SA1021) with Tanon 5200 system. A specific band was detected for IL6.

11 Publications Citing This Product

- PubMed ID: -, Gang Zhong, Huiping Long, Shiting Ma, Yao Shunhan, Jia Li, Jun Yao, miRNA-335-5p relieves chondrocyte inflammation by activating autophagy in osteoarthritis, Life Sciences, Volume 226, 2019, Pages 164-172, ISSN 0024-3205, <https://doi.org/10.1016/j.lfs.2019.03.071>.
- PubMed ID: 24603891, Sun W, Liu Db, Li Ww, Zhang Li, Long Gx, Wang Jf, Mei Q, Hu Gq. Int J Oncol. 2014 May;44(5):1551-60. Doi: 10.3892/Ijo.2014.2323. Epub 2014 Mar 5. Interleukin-6 Promotes The Migration And Invasion Of Nasopharyngeal Carcinoma Cell Lines And Upregula...
- PubMed ID: 26990441, Inhibition of Acute Lung Injury by TNFR-Fc through Regulation of an Inflammation-Oxidative Stress Pathway

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