

IL-10 (A00045.01): sc-81028

BACKGROUND

Interleukin-10, or IL-10, is a 178 amino acid protein that is primarily secreted by TH2 clones. IL-10 has dual functions, the first of which is the suppression of cytokine production by TH1 clones responding to antigen presented by monocyte and macrophage antigen presenting cells (APCs). The second function consists of the inhibition of response of cytokine targeted cells, possibly by the downregulation of CD25 (the IL-2 receptor) on macrophages and B lymphocytes. Human and murine IL-10 exhibit 81% sequence identity at the amino acid level and share 73% identity at the cDNA level. Both human and murine IL-10 are acid-labile and exist as non-covalently-linked homodimers in solution. IL-10 exerts its biological activity through the IL-10 receptor (IL-10R), a glycoprotein whose expression can be induced in cultured macrophages and fibroblasts by lipopolysaccharide (LPS) stimulation. IL-10 expression has been shown to be elevated in HIV-1 infected individuals and has been implicated in the progression of the disease.

REFERENCES

- Feng, L., et al. 1993. Molecular cloning of rat cytokine synthesis inhibitory factor (IL-10) cDNA and expression in spleen and macrophages. *Biochem. Biophys. Res. Commun.* 192: 452-458.
- Cohen, S.B., et al. 1994. IL-10 enhances expression of the IL-2 receptor α chain on T cells. *Immunology* 83: 329-332.
- Weber-Nordt, R.M., et al. 1994. Lipopolysaccharide-dependent induction of IL-10 receptor expression on murine fibroblasts. *J. Immunol.* 153: 3734-3744.
- Bromberg, J.S. 1995. IL-10 immunosuppression in transplantation. *Curr. Opin. Immunol.* 7: 639-643.
- Finnegan, A., et al. 1996. IL-10 cooperates with TNF α to activate HIV-1 from latently and acutely infected cells of monocyte/macrophage lineage. *J. Immunol.* 156: 841-851.
- Fleming, S.D., et al. 1996. Macrophages have cell surface IL-10 that regulates macrophage bactericidal activity. *J. Immunol.* 156: 1143-1150.
- Ludewig, B., et al. 1996. Transmission of HIV-1 from productively infected mature Langerhans cells to primary CD4⁺ T lymphocytes results in altered T cell responses with enhanced production of IFN- γ and IL-10. *Virology* 215: 51-60.
- Min, C.K., et al. 2007. IL-10-transduced bone marrow mesenchymal stem cells can attenuate the severity of acute graft-versus-host disease after experimental allogeneic stem cell transplantation. *Bone Marrow Transplant.* 39: 637-645.
- Kolkowski, E.C., et al. 2007. Human intestinal $\alpha\beta$ IEL clones in celiac disease show reduced IL-10 synthesis and enhanced IL-2 production. *Cell. Immunol.* 244: 1-9.

CHROMOSOMAL LOCATION

Genetic locus: IL10 (human) mapping to 1q32.1.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SOURCE

IL-10 (A00045.01) is a mouse monoclonal antibody raised against recombinant IL-10 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-10 (A00045.01) is recommended for detection of IL-10 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), intracellular flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-10 siRNA (h): sc-39634, IL-10 shRNA Plasmid (h): sc-39634-SH and IL-10 shRNA (h) Lentiviral Particles: sc-39634-V.

Molecular Weight of IL-10 monomer: 20 kDa.

Molecular Weight of IL-10 dimer: 37 kDa.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **IL-10 (E-10): sc-8438** for IL-10 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.